COEFFICIENTS FOR CALCULATING RADIATION IMPEDANCES AND FAR-FIELD PRESSURES OF FREE-FLOODED RING TRANDUCERS

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20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

Tables of coefficients for determining the radiation impedance and far-field pressure of a free-flooded vibrating ring in an arbitrary medium at 45 frequencies for each of 36 ring geometries were produced. The only restriction on the known velocity distribution for using the tables is that the inside, top and bottom, and outside normal surface velocities must be uniform. Simple formulas for determining the normal surface velocity distribution for some special cases and formulas for determining the radiation resistance and far-field pressure in the low-frequency limit were developed.

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CONTENTS

COEFFICIENTS FOR CALCULATING RADIATION IMPEDANCES AND FAR-FIELD PRESSURES OF FREE-FLOODED RING TRANSDUCERS

INTRODUCTION

The free-field radiation characteristics of a vibrating free-flooded ring (right rectangular toroid) are completely determined by the frequency of oscillation, the ring geometry, the normal velocity of the surface of the ring, and the density and sound speed of the acoustic medium. The parameters of the medium are easily factored out of the expressions characterizing the radiation from free-flood rings. Hence, radiation from ring transducers can be characterized by the relative dimensions and acoustic size of the ring independent of the parameters of the medium. The normal velocity distribution on the surface of a ring transducer, however, is a function not only of the ring geometry and frequency of oscillation but also of the ring material parameters, the type of drive, and the acoustic load. It is obviously not possible to include all these parameters in a table of radiation characteristics for free-flooded rings. Therefore, as a compromise, we will present numerical data corresponding to each surface having a unit outward velocity, with the remaining surfaces fixed in space. Formulas will be presented for combining the data to obtain numerical values corresponding to actual physical situations.

The data presented in the tables in Appendix A were generated with the latest version of the NRL SHIP program [1], a fast computer algorithm for determining the radiation characteristics of free-flooded ring transducers whose normal axisymmetric velocity distribution is known. A listing of the program is given in Appendix B.

Two tables are presented for each of the 36 ring geometries considered. The first table for each geometry contains impedance coefficients, and the second table contains pressure coefficients. The coefficients in these tables are unitless complex numbers. The surface velocity distribution, the frequency of oscillation, an absolute dimension of the ring, and the density and sound speed of the medium must be known before these coefficients can be converted into absolute numbers. In the case of the far-field pressure, the distance at which the pressure is to be determined must also be known. The numbers in the tables are believed to be accurate within 1%, except for those that determine the real part of the radiation impedance for very thin geometries at low frequencies. However, at very low frequencies the radiation resistance (and the far-field pressure) can be determined from simple formulas.

DESCRIPTION AND USE OF TABLES

Figure 1 shows the ring geometry nomenclature used in developing the tables. T and H are defined by the identities

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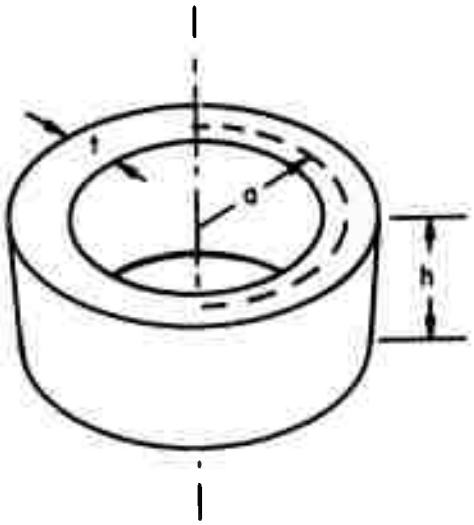

Fig. 1—Ring geometry nomenclature

$$T \equiv \frac{t}{a} \tag{1}$$

and

$$H \equiv \frac{h}{a}, \tag{2}$$

where t = thickness, a = mean radius, and h = ring height. Each table presents impedance and pressure coefficients for a specific value of T and H as a function of ka where k, the wave number, is defined by

$$k = \frac{2\pi f}{c} \tag{3}$$

f being the frequency of oscillation and c the velocity of sound. The 36 geometries considered correspond to all possible combinations of T = 0.05, 0.1, 0.2, 0.3, and 0.5 and H = 0.1, 0.2, 0.5, 1.0, 2.0, 3.0, and 5.0 as well as the special case T = 2/9 and H = 4/9. For each geometry, ka = 0.01, 0.05, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50, ..., 3.70, 3.80, 3.90, 4.00, 4.50, and 5.00.

The subscripts 1, 2, and 3 refer to the inside, top and bottom, and outside surfaces, respectively. The positive normal direction is defined to be outward from the ring material. An impedance Z_{ij} can be defined as

$$Z_{ij} = \frac{p_j A_j}{V_i \rho c A} \tag{4}$$

where p_j is the average rms pressure on surface j caused by a normal rms velocity V_i on surface i. The area of surface j is A_j, the entire surface area of the ring is A, and ρ is the

density of the medium. In Eq. (4) it is assumed that the velocity V_i is constant or can be approximated by a constant over the surface(s) i. The total complex power P radiated is

$$P = \sum_{i,j=1}^{3} \rho c A V_i Z_{ij} V_j^* \tag{5}$$

where the asterisk denotes the complex conjugate.

If one wishes to define a single impedance Z for the entire ring, it is necessary to choose an appropriate reference velocity V. For example, V may be the velocity of the mean radius, or V_1, V_2, or V_3, or any linear combination of these. Then, by definition,

$$P = ZVV^*, \tag{6}$$

so that

$$Z = \frac{\sum_{i,j=1}^{3} \rho c A V_i Z_{ij} V_j^*}{VV^*}. \tag{7}$$

If

$$\begin{aligned} Z_1 &\equiv Z_{11}, \\ Z_2 &\equiv Z_{22}, \\ Z_3 &\equiv Z_{33}, \\ Z_1' &\equiv Z_{23} + Z_{32}, \\ Z_2' &\equiv Z_{31} + Z_{13}, \end{aligned} \tag{8}$$

and

$$Z_3' \equiv Z_{12} + Z_{21},$$

then the radiation impedance is given by

$$Z = \frac{\rho c A}{VV^*} \left[\sum_{i=1}^{3} Z_i |V_i|^2 + \mathrm{Re}\left(Z_1' V_2 V_3^* + Z_2' V_3 V_1^* + Z_3' V_1 V_2^* \right) \right].$$

The quantities Z_i and Z_i' are listed in the tables of impedance coefficients. If the velocities are real and the reference velocity is unity, then the expression for the radiation impedance becomes

$$Z = \rho c A \left(\sum_{i=1}^{3} Z_i V_i^2 + Z_1' V_2 V_3 + Z_2' V_3 V_1 + Z_3' V_1 V_2 \right)$$

where now the velocities V_i are unitless. As an example, suppose we have an isotropic ring whose dimensions are a = 0.1 m, h = 0.2 m, and t = 0.02 m, and we want to know the radiation impedance Z in water at 2387 Hz. For this example, assume that the relative surface velocity distribution of the ring is that of the ring vibrating in a vacuum at its first radial resonance. Assume further that this velocity distribution can be approximated with sufficient accuracy by

$$V_1 = -1 - \frac{1}{2} T\sigma,$$

$$V_2 = -\frac{1}{2} H\sigma,$$

and

$$V_3 = 1 - \frac{1}{2} T\sigma$$

where σ is Poisson's ratio and the velocity distribution represents surface velocities relative to the reference mean radial velocity [2]. If σ is chosen to be 0.3, the relative velocities (unitless numbers) become $V_1 = -1.030$, $V_2 = -0.300$, and $V_3 = 0.970$. The impedance coefficient tables in Appendix A are listed according to the values of T and H. For each geometry, the corresponding table lists impedance coefficients as a function of ka. In this example, T = 0.2, H = 2.0, and ka = 1.0. The problem is to evaluate

$$Z = \rho cA\left(\sum_{i=1}^{3} Z_i V_i^2 + Z_1' V_2 V_3 + Z_2' V_3 V_1 + Z_3' V_1 V_2\right).$$

For water, ρc is 1.5×10^6 kg/s m^2. The total surface area A of the ring is 0.2765 m^2. The values of V_i have been determined previously and the impedance coefficients are listed in Table A23a. The radiation impedance in this example is $(1.627 \times 10^6 + j\, 1.064 \times 10^6)$ kg/s or mks mechanical ohms. The convention here is that massive reactances are positive. (Large negative reactances can occur in the region of a strong cavity resonance; i.e., the radiation reactance becomes springlike.)

Interpolation between frequencies listed is valid as long as the impedances are not changing too rapidly. Interpolation between geometries can be used to indicate trends. The numerical value of the impedance obtained in this way is unlikely to be accurate.

The pressure coefficients p_i^0 and p_i^{90} are unitless complex numbers from which the far-field pressure along the radial and axial directions, respectively, can be calculated according to

$$p = \frac{\rho cA}{d} \sum_{i=1}^{3} V_i p_i$$

where d is the distance at which the pressure is to be determined and the values of V_i are the actual (not relative) surface velocities of the ring. For p^0, substitute the p_i^0 coefficients; for p^{90}, substitute the p_i^{90} coefficients. The only pressure coefficients

listed in the tables in Appendix A are those corresponding to 0° and 90°; however, pressure coefficients have been determined at 5° intervals and are stored on magnetic tape. (These coefficients are available on request.) The reason the formula for far-field pressure is simple is that linear superposition holds.

In the previous example, assume that the far-field pressure at 1 m is to be determined when the mean radial velocity is 1 m/s. In this case the relative surface velocities listed are the actual surface velocities and the quantity $\rho ca/d$ is 1.5×10^5. The far-field pressure at 1 m is $|p^0| = 6.192 \times 10^5$ *Pa*, or 235.8 dB re 1 μ*Pa* at 1 m, and $|p^{90}| = 7.419 \times 10^4$ *Pa*, or 217.4 dB re 1 μ*Pa* at 1 m.

These pressures are for a ring vibrating with a mean radial velocity of 1 m/s, an abnormally large value for the usual transducer materials and a ring of the geometry of this example. This is the reason for the high far-field pressure. The actual pressure decreases linearly as the mean radial velocity of the ring is reduced.

The values of the resistive portion of the impedance coefficients at low frequencies for rings of small t/a ratio have errors somewhat larger than 1%. However, these occur well into the region where the radiation is monopole. A simple formula for predicting the radiation resistance will be presented in the next section. Also, for certain combinations of ring geometry and velocity distribution, a large subtraction error results from using the tables for calculating the radiation resistance in the monopole region. Again the cure is to use the monopole radiation formulas presented in the next section. The tables can easily be extended to even lower frequencies because in the monopole region the radiation reactance and the magnitude of the far-field pressure are directly proportional to the frequency and the radiation resistance is proportional to the square of the frequency. The same guidelines apply to pressure interpolation as apply to impedance interpolation.

LOW-FREQUENCY VELOCITY DISTRIBUTIONS

At frequencies somewhat below the first mechanical resonance of the free-flooded ring, the ring is essentially in static equilibrium with whatever driving force is causing the ring to vibrate. As a specific example we will consider a piezoceramic ring driven in three different ways [3,4]. The first case is a ring driven through its thickness t; i.e., a ring polarized and driven with electrodes on the inside and outside surfaces. Only one constitutive relation is needed to establish the velocity distribution:

$$\mathcal{S} = \mathbf{s}^{\mathcal{E}}\mathcal{T} + \mathbf{d}_t\mathcal{E}$$

where $\mathcal{S}$ is the strain, $\mathbf{s}^{\mathcal{E}}$ is the compliance matrix at constant electric field, $\mathcal{T}$ is the stress, $\mathbf{d}$ is a matrix giving the strain per applied electric field, and $\mathcal{E}$ is the applied electric field [5]. For low-frequency operation, assume static equilibrium at any instant of time; i.e., set $\mathcal{T} = 0$. Note that this condition does not preclude the possibility of a prestressed ring. Thus,

$$\mathcal{S} = \mathbf{d}_t\mathcal{E}\,.$$

The usual convention is to let the 3 direction be the polarization direction, and in our case it will also correspond to the direction of the applied field $\mathcal{E}$. Since at any fixed frequency the velocity is proportional to the strain, it is easily shown that the relative velocity distribution is given by

$$V_1 = -1 - \frac{1}{2} T \frac{1}{\sigma'},$$

$$V_2 = \frac{1}{2} H,$$

and

$$V_3 = 1 - \frac{1}{2} T \frac{1}{\sigma'}$$

where

$$\sigma' = -\frac{d_{31}}{d_{33}}.$$

The second case to consider is the one in which the ring is driven through its height h; i.e., the ring is polarized and driven with electrodes on the top and bottom surfaces. The analysis is again straightforward, and the resulting relative velocity distribution is

$$V_1 = -1 + \frac{1}{2} T,$$

$$V_2 = -\frac{1}{2} H \frac{1}{\sigma'},$$

and

$$V_3 = 1 + \frac{1}{2} T$$

where again

$$\sigma' = -\frac{d_{31}}{d_{33}}.$$

In the third case the ring is circumferentially driven. This can be achieved if the ring is divided into an even number of segments separated by electrodes. The assembled ring is then polarized and driven with these electrodes, resulting in circumferential fields and hence circumferential drive. The analysis is again straightforward, and the resulting velocity distribution is

$$V_1 = -1 - \frac{1}{2} T\sigma',$$

$$V_2 = -\frac{1}{2} H\sigma',$$

and

$$V_3 = 1 - \frac{1}{2} T\sigma'$$

where again

$$\sigma' = -\frac{d_{31}}{d_{33}}.$$

Another important case to consider is the velocity distribution at the first radial resonance of an isotropic ring. If it were possible to excite such a ring and the ring were not loaded heavily acoustically, then its velocity distribution would be approximated [2] by

$$V_1 = -1 - \frac{1}{2} T\sigma,$$

$$V_2 = -\frac{1}{2} H\sigma,$$

and

$$V_3 = 1 - \frac{1}{2} T\sigma$$

where σ is Poisson's ratio for the material. These velocity distributions are all relative to a unit mean radial velocity.

LOW-FREQUENCY RADIATION CHARACTERISTICS

At sufficiently low frequencies, the radiation from free-flooded rings is monopole. In this case simple formulas can be developed to predict the radiation resistance and the far-field pressure. The radiation resistance R is given by

$$R = \rho c \pi a^2 (ka)^2 \left[2V_2 T + (V_1 + V_3) H + \frac{1}{2} (V_3 - V_1) HT \right]^2$$

where V_1, V_2, and V_3 are relative velocities; i.e., unitless relative to a unit mean radial velocity. For a mean radial velocity V, the far-field pressure at distance d is given by

$$p = \frac{V}{d} \left[\frac{\rho c R}{4\pi} \right]^{1/2}.$$

CONCLUDING REMARKS

The formulas presented were experimentally tested, and agreement was quite good [3,4]. A novel application of the data in the tables is to measure the low-frequency directivity patterns as a function of frequency for a piezoceramic ring. The best value of $\sigma' = -d_{31}/d_{33}$ that accurately predicts the quantity $|p^0/p^{90}|$ is a good measure of the ratio of the two parameters d_{31} and d_{33}. This was tried and the agreement with published values was again quite good [3,4].

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Appendix A

IMPEDANCE AND PRESSURE COEFFICIENTS

LIST OF TABLES

Table A1a
Impedance Coefficients
$T = 0.05 \quad H = 0.1$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	1.578-006	3.904-004	1.667-006	3.182-004	1.756-006	3.878-004	3.421-006	4.956-004	3.329-006	4.170-004	3.244-006	4.997-004
0.05	3.943-005	1.951-003	4.163-005	1.589-003	4.385-005	1.938-003	8.545-005	2.475-003	8.317-005	2.082-003	8.104-005	2.496-003
0.10	1.574-004	3.895-003	1.661-004	3.171-003	1.749-004	3.866-003	3.409-004	4.934-003	3.318-004	4.148-003	3.234-004	4.977-003
0.15	3.529-004	5.826-003	3.721-004	4.736-003	3.916-004	5.777-003	7.635-004	7.358-003	7.435-004	6.183-003	7.248-004	7.429-003
0.20	6.242-004	7.736-003	6.577-004	6.278-003	6.914-004	7.661-003	1.349-003	9.732-003	1.314-003	8.169-003	1.281-003	9.836-003
0.30	1.395-003	1.147-002	1.455-003	9.261-003	1.525-003	1.132-002	2.979-003	1.427-002	2.907-003	1.194-002	2.839-003	1.446-002
0.40	2.413-003	1.504-002	2.526-003	1.207-002	2.639-003	1.477-002	5.163-003	1.842-002	5.046-003	1.535-002	4.937-003	1.875-002
0.50	3.675-003	1.842-002	3.827-003	1.464-002	3.980-003	1.798-002	7.805-003	2.210-002	7.648-003	1.831-002	7.500-003	2.261-002
0.60	5.128-003	2.157-002	5.309-003	1.696-002	5.488-003	2.090-002	1.080-002	2.523-002	1.061-002	2.075-002	1.044-002	2.598-002
0.70	6.726-003	2.445-002	6.912-003	1.899-002	7.097-003	2.351-002	1.401-002	2.775-002	1.382-002	2.260-002	1.364-002	2.879-002
0.80	8.417-003	2.704-002	8.577-003	2.071-002	8.736-003	2.581-002	1.731-002	2.966-002	1.715-002	2.385-002	1.699-002	3.013-002
0.90	1.015-002	2.938-002	1.024-002	2.214-002	1.034-002	2.779-002	2.058-002	3.096-002	2.048-002	2.449-002	2.039-002	3.267-002
1.00	1.186-002	3.142-002	1.185-002	2.328-002	1.183-002	2.950-002	2.367-002	3.168-002	2.368-002	2.455-002	2.371-002	3.374-002
1.10	1.352-002	3.320-002	1.333-002	2.415-002	1.316-002	3.096-002	2.649-002	3.189-002	2.666-002	2.407-002	2.684-002	3.428-002
1.20	1.505-002	3.473-002	1.465-002	2.481-002	1.428-002	3.223-002	2.892-002	3.167-002	2.929-002	2.314-002	2.969-002	3.434-002
1.30	1.643-002	3.605-002	1.576-002	2.528-002	1.515-002	3.336-002	3.090-002	3.113-002	3.151-002	2.183-002	3.218-002	3.400-002
1.40	1.762-002	3.720-002	1.664-002	2.562-002	1.576-002	3.443-002	3.236-002	3.039-002	3.325-002	2.026-002	3.423-002	3.336-002
1.50	1.859-002	3.822-002	1.726-002	2.590-002	1.609-002	3.550-002	3.329-002	2.959-002	3.446-002	1.855-002	3.579-002	3.251-002
1.60	1.931-002	3.916-002	1.761-002	2.617-002	1.616-002	3.665-002	3.369-002	2.885-002	3.514-002	1.681-002	3.684-002	3.158-002
1.70	1.979-002	4.009-002	1.772-002	2.650-002	1.599-002	3.794-002	3.359-002	2.830-002	3.530-002	1.518-002	3.739-002	3.068-002
1.80	2.001-002	4.105-002	1.759-002	2.694-002	1.564-002	3.943-002	3.306-002	2.806-002	3.499-002	1.378-002	3.744-002	2.993-002
1.90	2.001-002	4.210-002	1.727-002	2.756-002	1.515-002	4.117-002	3.219-002	2.824-002	3.426-002	1.271-002	3.705-002	2.944-002
2.00	1.980-002	4.330-002	1.679-002	2.838-002	1.459-002	4.318-002	3.109-002	2.892-002	3.323-002	1.206-002	3.630-002	2.930-002
2.10	1.942-002	4.468-002	1.623-002	2.946-002	1.405-002	4.549-002	2.990-002	3.014-002	3.198-002	1.192-002	3.528-002	2.960-002
2.20	1.891-002	4.624-002	1.563-002	3.080-002	1.358-002	4.810-002	2.876-002	3.192-002	3.067-002	1.231-002	3.408-002	3.039-002
2.30	1.833-002	4.814-002	1.507-002	3.241-002	1.328-002	5.097-002	2.781-002	3.425-002	2.941-002	1.325-002	3.284-002	3.171-002
2.40	1.772-002	5.026-002	1.461-002	3.428-002	1.320-002	5.407-002	2.718-002	3.708-002	2.834-002	1.472-002	3.168-002	3.356-002
2.50	1.717-002	5.264-002	1.431-002	3.638-002	1.341-002	5.735-002	2.699-002	4.032-002	2.760-002	1.667-002	3.072-002	3.592-002
2.60	1.671-002	5.529-002	1.423-002	3.868-002	1.394-002	6.073-002	2.735-002	4.387-002	2.728-002	1.902-002	3.008-002	3.875-002
2.70	1.640-002	5.817-002	1.441-002	4.112-002	1.481-002	6.414-002	2.831-002	4.760-002	2.749-002	2.168-002	2.985-002	4.196-002
2.80	1.630-002	6.126-002	1.487-002	4.365-002	1.604-002	6.750-002	2.993-002	5.137-002	2.829-002	2.452-002	3.013-002	4.547-002
2.90	1.644-002	6.451-002	1.565-002	4.620-002	1.760-002	7.074-002	3.220-002	5.505-002	2.972-002	2.742-002	3.096-002	4.918-002
3.00	1.685-002	6.788-002	1.673-002	4.872-002	1.947-002	7.378-002	3.510-002	5.848-002	3.179-002	3.024-002	3.240-002	5.296-002
3.10	1.756-002	7.132-002	1.811-002	5.112-002	2.159-002	7.656-002	3.858-002	6.155-002	3.449-002	3.285-002	3.445-002	5.670-002
3.20	1.857-002	7.476-002	1.977-002	5.337-002	2.392-002	7.903-002	4.256-002	6.412-002	3.776-002	3.511-002	3.710-002	6.028-002
3.30	1.990-002	7.816-002	2.167-002	5.540-002	2.638-002	8.114-002	4.693-002	6.612-002	4.155-002	3.693-002	4.032-002	6.359-002
3.40	2.152-002	8.147-002	2.377-002	5.717-002	2.890-002	8.289-002	5.157-002	6.746-002	4.576-002	3.821-002	4.406-002	6.652-002
3.50	2.343-002	8.463-002	2.603-002	5.865-002	3.140-002	8.427-002	5.636-002	6.810-002	5.031-002	3.885-002	4.825-002	6.898-002
3.60	2.560-002	8.759-002	2.838-002	5.980-002	3.382-002	8.527-002	6.117-002	6.802-002	5.506-002	3.880-002	5.281-002	7.089-002
3.70	2.800-002	9.031-002	3.077-002	6.062-002	3.606-002	8.593-002	6.584-002	6.721-002	5.990-002	3.802-002	5.765-002	7.219-002
3.80	3.060-002	9.275-002	3.313-002	6.109-002	3.807-002	8.628-002	7.026-002	6.571-002	6.469-002	3.650-002	6.266-002	7.281-002
3.90	3.334-002	9.488-002	3.541-002	6.122-002	3.979-002	8.638-002	7.428-002	6.357-002	6.931-002	3.422-002	6.773-002	7.274-002
4.00	3.617-002	9.666-002	3.754-002	6.102-002	4.115-002	8.628-002	7.779-002	6.086-002	7.360-002	3.122-002	7.273-002	7.195-002
4.50	4.963-002	1.000-001	4.401-002	5.649-002	4.193-002	8.574-002	8.441-002	4.315-002	8.583-002	8.170-003	9.227-002	5.817-002
5.00	5.562-002	9.646-002	4.103-002	5.235-002	3.566-002	9.298-002	7.281-002	3.362-002	7.656-002	-1.440-002	9.311-002	3.758-002

Table A1b
Pressure Coefficients
$T = 0.05 \quad H = 0.1$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	1.295-012 -4.975-004	1.328-012 -5.000-004	1.362-012 -5.125-004	-1.306-011 -4.875-004	1.250-012 -5.000-004	-1.373-011 -5.125-004
0.05	8.075-010 -2.436-003	8.281-010 -2.498-003	8.488-010 -2.561-003	6.879-010 -2.437-003	7.806-010 -2.500-003	7.230-010 -2.562-003
0.10	1.282-008 -4.865-003	1.314-008 -4.987-003	1.347-008 -5.110-003	1.214-008 -4.875-003	1.246-008 -5.000-003	1.276-008 -5.125-003
0.15	6.404-008 -7.278-003	6.564-008 -7.458-003	6.724-008 -7.637-003	6.117-008 -7.312-003	6.280-008 -7.499-003	6.424-008 -7.687-003
0.20	1.987-007 -9.668-003	2.035-007 -9.900-003	2.084-007 -1.013-002	1.925-007 -9.748-003	1.973-007 -9.998-003	2.020-007 -1.025-002
0.30	9.528-007 -1.435-002	9.748-007 -1.466-002	9.969-007 -1.498-002	9.597-007 -1.462-002	9.820-007 -1.499-002	1.004-006 -1.537-002
0.40	2.796-006 -1.885-002	2.845-006 -1.920-002	2.905-006 -1.956-002	2.968-006 -1.949-002	3.030-006 -1.998-002	3.094-006 -2.049-002
0.50	6.130-006 -2.310-002	6.246-006 -2.346-002	6.362-006 -2.380-002	7.044-006 -2.435-002	7.175-006 -2.496-002	7.307-006 -2.560-002
0.60	1.112-005 -2.707-002	1.130-005 -2.735-002	1.148-005 -2.762-002	1.411-005 -2.921-002	1.433-005 -2.994-002	1.455-005 -3.071-002
0.70	1.738-005 -3.069-002	1.760-005 -3.083-002	1.783-005 -3.095-002	2.510-005 -3.407-002	2.540-005 -3.491-002	2.570-005 -3.582-002
0.80	2.387-005 -3.392-002	2.411-005 -3.385-002	2.436-005 -3.374-002	4.085-005 -3.892-002	4.116-005 -3.987-002	4.148-005 -4.092-002
0.90	2.887-005 -3.672-002	2.909-005 -3.634-002	2.933-005 -3.592-002	6.202-005 -4.376-002	6.220-005 -4.482-002	6.240-005 -4.602-002
1.00	2.996-005 -3.904-002	3.020-005 -3.828-002	3.048-005 -3.746-002	8.902-005 -4.860-002	8.880-005 -4.976-002	8.862-005 -5.111-002
1.10	2.428-005 -4.086-002	2.472-005 -3.962-002	2.525-005 -3.830-002	1.220-004 -5.344-002	1.209-004 -5.470-002	1.200-004 -5.620-002
1.20	8.769-006 -4.214-002	9.913-006 -4.033-002	1.121-005 -3.843-002	1.605-004 -5.828-002	1.581-004 -5.962-002	1.559-004 -6.129-002
1.30	-1.938-005 -4.285-002	-1.659-005 -4.039-002	-1.357-005 -3.783-002	2.041-004 -6.311-002	1.997-004 -6.454-002	1.954-004 -6.638-002
1.40	-6.234-005 -4.299-002	-5.631-005 -3.979-002	-4.997-005 -3.647-002	2.518-004 -6.795-002	2.444-004 -6.945-002	2.374-004 -7.147-002
1.50	-1.211-004 -4.252-002	-1.095-004 -3.851-002	-9.748-005 -3.438-002	3.022-004 -7.278-002	2.909-004 -7.435-002	2.802-004 -7.655-002
1.60	-1.953-004 -4.145-002	-1.749-004 -3.656-002	-1.539-004 -3.156-002	3.539-004 -7.761-002	3.378-004 -7.924-002	3.226-004 -8.164-002
1.70	-2.829-004 -3.976-002	-2.494-004 -3.396-002	-2.154-004 -2.803-002	4.054-004 -8.244-002	3.835-004 -8.412-002	3.631-004 -8.671-002
1.80	-3.795-004 -3.747-002	-3.282-004 -3.071-002	-2.764-004 -2.383-002	4.551-004 -8.727-002	4.268-004 -8.898-002	4.006-004 -9.179-002
1.90	-4.799-004 -3.459-002	-4.054-004 -2.695-002	-3.305-004 -1.900-002	5.017-004 -9.209-002	4.668-004 -9.383-002	4.345-004 -9.685-002
2.00	-5.774-004 -3.113-002	-4.741-004 -2.242-002	-3.708-004 -1.362-002	5.446-004 -9.690-002	5.030-004 -9.865-002	4.650-004 -1.019-001
2.10	-6.648-004 -2.713-002	-5.276-004 -1.746-002	-3.912-004 -7.746-003	5.833-004 -1.017-001	5.358-004 -1.034-001	4.930-004 -1.069-001
2.20	-7.351-004 -2.262-002	-5.600-004 -1.205-002	-3.869-004 -1.465-003	6.184-004 -1.065-001	5.663-004 -1.082-001	5.203-004 -1.119-001
2.30	-7.827-004 -1.765-002	-5.675-004 -6.235-003	-3.558-004 5.132-003	6.512-004 -1.112-001	5.967-004 -1.130-001	5.497-004 -1.169-001
2.40	-8.040-004 -1.227-002	-5.489-004 -1.045-004	-2.990-004 1.194-002	6.839-004 -1.160-001	6.297-004 -1.177-001	5.848-004 -1.219-001
2.50	-7.984-004 -6.539-003	-5.061-004 6.265-003	-2.214-004 1.887-002	7.194-004 -1.207-001	6.692-004 -1.223-001	6.301-004 -1.269-001
2.60	-7.680-004 -5.214-004	-4.444-004 1.279-002	-1.312-004 2.581-002	7.617-004 -1.254-001	7.195-004 -1.269-001	6.903-004 -1.318-001
2.70	-7.186-004 5.717-003	-3.725-004 1.938-002	-3.967-005 3.264-002	8.151-004 -1.301-001	7.853-004 -1.315-001	7.706-004 -1.367-001
2.80	-6.585-004 1.211-002	-3.012-004 2.595-002	3.987-005 3.928-002	8.845-004 -1.347-001	8.717-004 -1.361-001	8.758-004 -1.415-001
2.90	-5.984-004 1.859-002	-2.430-004 3.243-002	9.345-005 4.562-002	9.749-004 -1.393-001	9.834-004 -1.406-001	1.011-003 -1.464-001
3.00	-5.499-004 2.509-002	-2.103-004 3.872-002	1.079-004 5.156-002	1.091-003 -1.439-001	1.125-003 -1.450-001	1.179-003 -1.512-001
3.10	-5.246-004 3.155-002	-2.144-004 4.477-002	7.255-005 5.703-002	1.239-003 -1.485-001	1.300-003 -1.495-001	1.383-003 -1.560-001
3.20	-5.323-004 3.791-002	-2.639-004 5.049-002	-1.966-005 6.195-002	1.421-003 -1.530-001	1.512-003 -1.539-001	1.625-003 -1.609-001
3.30	-5.804-004 4.411-002	-3.636-004 5.582-002	-1.708-004 6.625-002	1.642-003 -1.576-001	1.762-003 -1.583-001	1.905-003 -1.657-001
3.40	-6.723-004 5.010-002	-5.135-004 6.071-002	-3.774-004 6.986-002	1.904-003 -1.621-001	2.051-003 -1.626-001	2.222-003 -1.705-001
3.50	-8.067-004 5.584-002	-7.082-004 6.511-002	-6.304-004 7.274-002	2.209-003 -1.666-001	2.379-003 -1.670-001	2.573-003 -1.754-001
3.60	-9.768-004 6.126-002	-9.370-004 6.895-002	-9.151-004 7.494-002	2.558-003 -1.711-001	2.743-003 -1.713-001	2.953-003 -1.802-001
3.70	-1.170-003 6.633-002	-1.184-003 7.221-002	-1.212-003 7.610-002	2.948-003 -1.757-001	3.141-003 -1.757-001	3.357-003 -1.851-001
3.80	-1.370-003 7.101-002	-1.429-003 7.483-002	-1.500-003 7.650-002	3.379-003 -1.802-001	3.567-003 -1.800-001	3.777-003 -1.901-001
3.90	-1.554-003 7.523-002	-1.649-003 7.677-002	-1.754-003 7.601-002	3.846-003 -1.848-001	4.014-003 -1.844-001	4.205-003 -1.950-001
4.00	-1.696-003 7.896-002	-1.819-003 7.799-002	-1.950-003 7.459-002	4.343-003 -1.894-001	4.475-003 -1.887-001	4.631-003 -2.000-001
4.50	-2.699-004 8.935-002	-1.214-003 7.206-002	-1.596-003 5.308-002	6.959-003 -2.131-001	6.628-003 -2.108-001	6.349-003 -2.254-001
5.00	3.214-003 7.735-002	1.576-003 4.433-002	-1.627-004 9.498-003	8.652-003 -2.377-001	7.613-003 -2.325-001	6.747-003 -2.505-001

Table A2a
Impedance Coefficients
$T = 0.1 \quad H = 0.1$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	1.130-006	2.889-004	5.000-006	8.744-004	1.376-006	2.995-004	5.246-006	7.033-004	2.495-006	2.860-004	4.755-006	6.920-004
0.05	2.824-005	1.443-003	1.249-004	4.368-003	3.437-005	1.496-003	1.310-004	3.512-003	6.231-005	1.428-003	1.188-004	3.456-003
0.10	1.127-004	2.882-003	4.983-004	8.712-003	1.371-004	2.985-003	5.226-004	6.997-003	2.486-004	2.844-003	4.740-004	6.891-003
0.15	2.528-004	4.311-003	1.116-003	1.301-002	3.068-004	4.460-003	1.170-003	1.043-002	5.570-004	4.236-003	1.062-003	1.028-002
0.20	4.473-004	5.726-003	1.972-003	1.723-002	5.414-004	5.913-003	2.067-003	1.378-002	9.842-004	5.592-003	1.879-003	1.361-002
0.30	9.930-004	8.496-003	4.362-003	2.538-002	1.193-003	8.728-003	4.562-003	2.016-002	2.177-003	8.151-003	4.162-003	1.999-002
0.40	1.732-003	1.116-002	7.569-003	3.298-002	2.060-003	1.138-002	7.897-003	2.594-002	3.778-003	1.044-002	7.242-003	2.588-002
0.50	2.642-003	1.368-002	1.147-002	3.991-002	3.099-003	1.384-002	1.192-002	3.097-002	5.723-003	1.238-002	1.101-002	3.115-002
0.60	3.694-003	1.604-002	1.590-002	4.604-002	4.262-003	1.607-002	1.646-002	3.516-002	7.935-003	1.393-002	1.532-002	3.570-002
0.70	4.856-003	1.821-002	2.069-002	5.131-002	5.493-003	1.805-002	2.132-002	3.842-002	1.033-002	1.504-002	2.004-002	3.944-002
0.80	6.093-003	2.020-002	2.566-002	5.568-002	6.737-003	1.979-002	2.629-002	4.072-002	1.281-002	1.569-002	2.501-002	4.234-002
0.90	7.370-003	2.198-002	3.062-002	5.916-002	7.937-003	2.129-002	3.118-002	4.210-002	1.529-002	1.589-002	3.004-002	4.437-002
1.00	8.650-003	2.356-002	3.540-002	6.177-002	9.043-003	2.258-002	3.578-002	4.260-002	1.767-002	1.564-002	3.499-002	4.556-002
1.10	9.897-003	2.494-002	3.983-002	6.360-002	1.001-002	2.369-002	3.992-002	4.234-002	1.988-002	1.500-002	3.970-002	4.595-002
1.20	1.108-002	2.615-002	4.376-002	6.476-002	1.080-002	2.466-002	4.345-002	4.145-002	2.183-002	1.400-002	4.401-002	4.562-002
1.30	1.216-002	2.719-002	4.706-002	6.537-002	1.139-002	2.554-002	4.626-002	4.009-002	2.346-002	1.271-002	4.781-002	4.468-002
1.40	1.311-002	2.809-002	4.966-002	6.560-002	1.177-002	2.640-002	4.828-002	3.846-002	2.473-002	1.122-002	5.098-002	4.325-002
1.50	1.392-002	2.888-002	5.148-002	6.563-002	1.193-002	2.727-002	4.947-002	3.676-002	2.560-002	9.615-003	5.346-002	4.148-002
1.60	1.456-002	2.960-002	5.252-002	6.563-002	1.190-002	2.823-002	4.984-002	3.520-002	2.605-002	7.984-003	5.518-002	3.953-002
1.70	1.502-002	3.028-002	5.279-002	6.580-002	1.170-002	2.933-002	4.946-002	3.398-002	2.611-002	6.424-003	5.614-002	3.757-002
1.80	1.530-002	3.096-002	5.236-002	6.632-002	1.136-002	3.060-002	4.845-002	3.327-002	2.579-002	5.028-003	5.636-002	3.577-002
1.90	1.540-002	3.168-002	5.133-002	6.734-002	1.095-002	3.208-002	4.694-002	3.324-002	2.515-002	3.881-003	5.589-002	3.430-002
2.00	1.533-002	3.248-002	4.986-002	6.900-002	1.052-002	3.379-002	4.513-002	3.400-002	2.426-002	3.054-003	5.483-002	3.331-002
2.10	1.512-002	3.339-002	4.809-002	7.141-002	1.012-002	3.573-002	4.324-002	3.561-002	2.320-002	2.604-003	5.330-002	3.293-002
2.20	1.479-002	3.445-002	4.624-002	7.462-002	9.833-003	3.790-002	4.148-002	3.809-002	2.207-002	2.562-003	5.146-002	3.326-002
2.30	1.438-002	3.568-002	4.449-002	7.864-002	9.705-003	4.027-002	4.008-002	4.139-002	2.098-002	2.940-003	4.948-002	3.436-002
2.40	1.392-002	3.709-002	4.305-002	8.344-002	9.789-003	4.279-002	3.924-002	4.542-002	2.003-002	3.723-003	4.754-002	3.625-002
2.50	1.346-002	3.871-002	4.209-002	8.893-002	1.012-002	4.541-002	3.915-002	5.002-002	1.931-002	4.869-003	4.583-002	3.891-002
2.60	1.304-002	4.052-002	4.178-002	9.499-002	1.072-002	4.807-002	3.993-002	5.502-002	1.891-002	6.320-003	4.451-002	4.228-002
2.70	1.269-002	4.252-002	4.224-002	1.015-001	1.160-002	5.070-002	4.167-002	6.019-002	1.890-002	7.996-003	4.375-002	4.627-002
2.80	1.246-002	4.469-002	4.355-002	1.082-001	1.275-002	5.324-002	4.441-002	6.533-002	1.933-002	9.807-003	4.367-002	5.074-002
2.90	1.237-002	4.701-002	4.575-002	1.150-001	1.414-002	5.564-002	4.812-002	7.021-002	2.022-002	1.165-002	4.435-002	5.556-002
3.00	1.246-002	4.944-002	4.884-002	1.216-001	1.574-002	5.783-002	5.273-002	7.462-002	2.158-002	1.344-002	4.588-002	6.057-002
3.10	1.275-002	5.197-002	5.279-002	1.279-001	1.749-002	5.979-002	5.813-002	7.837-002	2.339-002	1.506-002	4.827-002	6.559-002
3.20	1.324-002	5.455-002	5.752-002	1.338-001	1.935-002	6.149-002	6.418-002	8.133-002	2.562-002	1.643-002	5.152-002	7.048-002
3.30	1.395-002	5.715-002	6.293-002	1.390-001	2.125-002	6.289-002	7.072-002	8.336-002	2.822-002	1.747-002	5.560-002	7.507-002
3.40	1.489-002	5.973-002	6.890-002	1.435-001	2.314-002	6.402-002	7.755-002	8.440-002	3.113-002	1.811-002	6.046-002	7.922-002
3.50	1.604-002	6.227-002	7.530-002	1.472-001	2.496-002	6.487-002	8.449-002	8.438-002	3.427-002	1.830-002	6.692-002	8.280-002
3.60	1.741-002	6.472-002	8.198-002	1.500-001	2.665-002	6.546-002	9.134-002	8.331-002	3.757-002	1.798-002	7.220-002	8.569-002
3.70	1.898-002	6.705-002	8.878-002	1.518-001	2.817-002	6.582-002	9.790-002	8.121-002	4.093-002	1.712-002	7.888-002	8.779-002
3.80	2.075-002	6.924-002	9.555-002	1.527-001	2.946-002	6.600-002	1.040-001	7.814-002	4.427-002	1.572-002	8.594-002	8.900-002
3.90	2.268-002	7.125-002	1.021-001	1.526-001	3.050-002	6.603-002	1.094-001	7.418-002	4.748-002	1.375-002	9.325-002	8.924-002
4.00	2.477-002	7.304-002	1.083-001	1.516-001	3.125-002	6.598-002	1.140-001	6.945-002	5.048-002	1.124-002	1.007-001	8.847-002
4.50	3.619-002	7.785-002	1.279-001	1.357-001	3.049-002	6.675-002	1.203-001	4.089-002	5.857-002	-7.850-003	1.326-001	6.886-002
5.00	4.401-002	7.532-002	1.195-001	1.191-001	2.595-002	7.488-002	9.990-002	2.739-002	4.916-002	-2.728-002	1.384-001	3.297-002

Table A2b
Pressure Coefficients
$T = 0.1 \quad H = 0.1$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	2.335-012 -4.750-004	4.915-012 -1.000-003	2.580-012 -5.250-004	-1.154-011 -4.750-004	5.000-012 -1.000-003	-1.275-011 -5.250-004
0.05	1.456-009 -2.374-003	3.065-009 -4.997-003	1.609-009 -2.623-003	1.412-009 -2.375-003	3.122-009 -5.000-003	1.560-009 -2.625-003
0.10	2.313-008 -4.741-003	4.868-008 -9.975-003	2.555-008 -5.234-003	2.367-008 -4.750-003	4.983-008 -9.999-003	2.614-008 -5.250-003
0.15	1.157-007 -7.093-003	2.434-007 -1.491-002	1.277-007 -7.820-003	1.193-007 -7.124-003	2.512-007 -1.500-002	1.317-007 -7.874-003
0.20	3.598-007 -9.424-003	7.563-007 -1.980-002	3.965-007 -1.037-002	3.753-007 -9.497-003	7.890-007 -1.999-002	4.136-007 -1.050-002
0.30	1.736-006 -1.400- 2	3.643-006 -2.932-002	1.907-006 -1.531-002	1.871-006 -1.424-002	3.926-006 -2.997-002	2.054-006 -1.574-002
0.40	5.126-006 -1.840- 2	1.073-005 -3.839-002	5.600-006 -1.998-002	5.787-006 -1.898-002	1.211-005 -3.994-002	6.321-006 -2.098-002
0.50	1.143-005 -2.259-0 2	2.385-005 -4.688-002	1.241-005 -2.426-002	1.374-005 -2.371-002	2.866-005 -4.988-002	1.491-005 -2.621-002
0.60	2.113-005 -2.651-002	4.391-005 -5.466-002	2.276-005 -2.810-002	2.755-005 -2.843-002	5.721-005 -5.981-002	2.965-005 -3.143-002
0.70	3.393-005 -3.012-002	7.018-005 -6.161-002	3.623-005 -3.142-002	4.905-005 -3.315-002	1.013-004 -6.971-002	5.226-005 -3.665-002
0.80	4.849-005 -3.337-002	9.983-005 -6.762-002	5.131-005 -3.414-002	7.991-005 -3.785-002	1.642-004 -7.958-002	8.417-005 -4.186-002
0.90	6.232-005 -3.623-002	1.277-004 -7.260-002	6.536-005 -3.622-002	1.215-004 -4.256-002	2.479-004 -8.943-002	1.263-004 -4.706-002
1.00	7.179-005 -3.866-002	1.466-004 -7.646-002	7.483-005 -3.760-002	1.747-004 -4.725-002	3.539-004 -9.926-002	1.789-004 -5.226-002
1.10	7.239-005 -4.062-002	1.479-004 -7.913-002	7.565-005 -3.825-002	2.398-004 -5.195-002	4.817-004 -1.091-001	2.416-004 -5.746-002
1.20	5.914-005 -4.210-002	1.227-004 -8.055-002	6.383-005 -3.815-002	3.163-004 -5.664-002	6.297-004 -1.189-001	3.129-004 -6.266-002
1.30	2.719-005 -4.306-002	6.271-005 -8.068-002	3.619-005 -3.726-002	4.032-004 -6.133-002	7.948-004 -1.286-001	3.910-004 -6.786-002
1.40	-2.757-005 -4.348-002	-3.768-005 -7.948-002	-8.884-006 -3.559-002	4.986-004 -6.602-002	9.725-004 -1.384-001	4.732-004 -7.306-002
1.50	-1.077-004 -4.334-002	-1.805-004 -7.693-002	-7.081-005 -3.313-002	6.001-004 -7.072-002	1.157-003 -1.481-001	5.565-004 -7.826-002
1.60	-2.137-004 -4.263-002	-3.631-004 -7.304-002	-1.464-004 -2.991-002	7.047-004 -7.541-002	1.343-003 -1.578-001	6.379-004 -8.346-002
1.70	-3.435-004 -4.133-002	-5.774-004 -6.781-002	-2.296-004 -2.595-002	8.093-004 -8.011-002	1.524-003 -1.675-001	7.146-004 -8.865-002
1.80	-4.922-004 -3.946-002	-8.099-004 -6.129-002	-3.122-004 -2.130-002	9.107-004 -8.481-002	1.694-003 -1.771-001	7.845-004 -9.383-002
1.90	-6.522-004 -3.700-002	-1.043-003 -5.354-002	-3.844-004 -1.602-002	1.006-003 -8.950-002	1.850-003 -1.867-001	8.468-004 -9.900-002
2.00	-8.139-004 -3.398-002	-1.257-003 -4.463-002	-4.358-004 -1.017-002	1.093-003 -9.418-002	1.991-003 -1.962-001	9.021-004 -1.041-001
2.10	-9.666-004 -3.041-002	-1.432-003 -3.467-002	-4.576-004 -3.846-003	1.172-003 -9.884-002	2.117-003 -2.057-001	9.526-004 -1.093-001
2.20	-1.100-003 -2.633-002	-1.550-003 -2.379-002	-4.436-004 2.858-003	1.241-003 -1.035-001	2.233-003 -2.151-001	1.003-003 -1.143-001
2.30	-1.204-003 -2.178-002	-1.600-003 -1.213-002	-3.919-004 9.832-003	1.304-003 -1.081-001	2.348-003 -2.243-001	1.059-003 -1.194-001
2.40	-1.272-003 -1.680-002	-1.579-003 1.478-004	-3.061-004 1.696-002	1.364-003 -1.127-001	2.474-003 -2.335-001	1.129-003 -1.244-001
2.50	-1.303-003 -1.146-002	-1.493-003 1.287-002	-1.956-004 2.413-002	1.426-003 -1.172-001	2.624-003 -2.425-001	1.221-003 -1.293-001
2.60	-1.299-003 -5.799-003	-1.361-003 2.586-002	-7.503-005 3.121-002	1.498-003 -1.217-001	2.816-003 -2.514-001	1.347-003 -1.343-001
2.70	-1.265-003 1.876-004	-1.208-003 3.893-002	3.668-005 3.809-002	1.588-003 -1.262-001	3.070-003 -2.602-001	1.516-003 -1.391-001
2.80	-1.215-003 6.201-003	-1.067-003 5.192-002	1.182-004 4.466-002	1.704-003 -1.306-001	3.403-003 -2.688-001	1.737-003 -1.440-001
2.90	-1.161-003 1.242-002	-9.741-004 6.466-002	1.483-004 5.081-002	1.856-003 -1.349-001	3.834-003 -2.773-001	2.018-003 -1.488-001
3.00	-1.120-003 1.870-002	-9.667-004 7.700-002	1.078-004 5.647-002	2.054-003 -1.392-001	4.379-003 -2.857-001	2.366-003 -1.536-001
3.10	-1.109-003 2.500-002	-1.076-003 8.879-002	-1.760-005 6.153-002	2.307-003 -1.435-001	5.053-003 -2.940-001	2.784-003 -1.583-001
3.20	-1.142-003 3.126-002	-1.326-003 9.991-002	-2.358-004 6.594-002	2.624-003 -1.478-001	5.865-003 -3.023-001	3.274-003 -1.631-001
3.30	-1.231-003 3.744-002	-1.729-003 1.103-001	-5.469-004 6.963-002	3.011-003 -1.520-001	6.822-003 -3.104-001	3.836-003 -1.679-001
3.40	-1.382-003 4.349-002	-2.282-003 1.197-001	-9.424-004 7.255-002	3.474-003 -1.562-001	7.927-003 -3.186-001	4.464-003 -1.728-001
3.50	-1.593-003 4.938-002	-2.968-003 1.282-001	-1.406-003 7.465-002	4.019-003 -1.604-001	9.177-003 -3.267-001	5.152-003 -1.777-001
3.60	-1.859-003 5.507-002	-3.757-003 1.357-001	-1.913-003 7.590-002	4.649-003 -1.646-001	1.057-002 -3.349-001	5.891-003 -1.826-001
3.70	-2.164-003 6.052-002	-4.601-003 1.420-001	-2.433-003 7.625-002	5.363-003 -1.688-001	1.209-002 -3.430-001	6.667-003 -1.876-001
3.80	-2.484-003 6.571-002	-5.441-003 1.471-001	-2.932-003 7.569-002	6.162-003 -1.730-001	1.371-002 -3.512-001	7.468-003 -1.927-001
3.90	-2.791-003 7.059-002	-6.210-003 1.510-001	-3.374-003 7.418-002	7.040-003 -1.773-001	1.543-002 -3.595-001	8.274-003 -1.978-001
4.00	-3.048-003 7.512-002	-6.835-003 1.535-001	-3.726-003 7.170-002	7.990-003 -1.817-001	1.721-002 -3.679-001	9.067-003 -2.031-001
4.50	-2.138-003 9.055-002	-5.583-003 1.427-001	-3.473-003 4.432-002	1.330-002 -2.050-001	2.568-002 -4.114-001	1.209-002 -2.301-001
5.00	4.274-003 8.708-002	2.838-003 8.762-002	-1.823-003 -5.348-003	1.710-002 -2.309-001	2.956-002 -4.550-001	1.238-002 -2.563-001

Table A3a
Impedance Coefficients
$T = 0.2 \quad H = 0.1$

$k\Delta$	Z_1	Z_2	Z_3	Z_4	Z_5	Z_6	Z_7	Z_8	Z_9	Z_{10}	Z_{11}
0.01	6.750-007	1.834-004	1.333-005	2.098-003	1.009-006	2.125-004	7.335-006	8.796-004	1.651-006	1.673-004	5.999-006	8.108-004
0.05	1.686-005	9.166-004	3.330-004	1.048-002	2.520-005	1.062-003	1.832-004	4.392-003	4.123-005	8.353-004	1.499-004	4.050-003
0.10	6.733-005	1.831-003	1.328-003	2.090-002	1.004-004	2.118-003	7.305-004	8.744-003	1.645-004	1.662-003	5.981-004	8.073-003
0.15	1.510-004	2.739-003	2.975-003	3.118-002	2.247-004	3.163-003	1.635-003	1.302-002	3.684-004	2.473-003	1.341-003	1.204-002
0.20	2.674-004	3.640-003	5.256-003	4.128-002	3.961-004	4.191-003	2.886-003	1.718-002	6.509-004	3.259-003	2.371-003	1.593-002
0.30	5.942-004	5.407-003	1.162-002	6.064-002	8.706-004	6.178-003	6.360-003	2.502-002	1.439-003	4.729-003	5.255-003	2.337-002
0.40	1.039-003	7.117-003	2.014-002	7.856-002	1.498-003	8.042-003	1.099-002	3.200-002	2.494-003	6.015-003	9.147-003	3.020-002
0.50	1.588-003	8.741-003	3.048-002	9.465-002	2.244-003	9.756-003	1.654-002	3.792-002	3.775-003	7.070-003	1.391-002	3.625-002
0.60	2.227-003	1.028-002	4.221-002	1.086-001	3.069-003	1.130-002	2.276-002	4.263-002	5.228-003	7.857-003	1.939-002	4.141-002
0.70	2.940-003	1.171-002	5.488-002	1.203-001	3.931-003	1.266-002	2.937-002	4.602-002	6.797-003	8.351-003	2.540-002	4.557-002
0.80	3.707-003	1.303-002	6.799-002	1.296-001	4.786-003	1.385-002	3.607-002	4.810-002	8.419-003	8.538-003	3.175-002	4.866-002
0.90	4.511-003	1.424-002	8.107-002	1.365-001	5.594-003	1.487-002	4.258-002	4.888-002	1.003-002	8.418-003	3.824-002	5.067-002
1.00	5.330-003	1.532-002	9.364-002	1.412-001	6.317-003	1.575-002	4.862-002	4.848-002	1.158-002	8.003-003	4.467-002	5.161-002
1.10	6.147-003	1.629-002	1.053-001	1.438-001	6.925-003	1.651-002	5.395-002	4.706-002	1.301-002	7.313-003	5.085-002	5.152-002
1.20	6.941-003	1.714-002	1.156-001	1.446-001	7.394-003	1.719-002	5.838-002	4.483-002	1.426-002	6.384-003	5.660-002	5.047-002
1.30	7.695-003	1.789-002	1.243-001	1.440-001	7.711-003	1.783-002	6.177-002	4.202-002	1.529-002	5.257-003	6.175-002	4.858-002
1.40	8.390-003	1.854-002	1.310-001	1.423-001	7.872-003	1.848-002	6.400-002	3.891-002	1.607-002	3.983-003	6.617-002	4.599-002
1.50	9.010-003	1.910-002	1.358-001	1.401-001	7.884-003	1.918-002	6.507-002	3.581-002	1.657-002	2.621-003	6.973-002	4.285-002
1.60	9.542-003	1.960-002	1.384-001	1.378-001	7.765-003	1.996-002	6.502-002	3.299-002	1.679-002	1.233-003	7.235-002	3.937-002
1.70	9.973-003	2.004-002	1.390-001	1.359-001	7.543-003	2.087-002	6.395-002	3.075-002	1.671-002	-1.163-004	7.398-002	3.573-002
1.80	1.029-002	2.045-002	1.376-001	1.356-001	7.257-003	2.193-002	6.205-002	2.934-002	1.637-002	-1.360-003	7.460-002	3.217-002
1.90	1.050-002	2.086-002	1.347-001	1.354-001	6.951-003	2.317-002	5.956-002	2.896-002	1.579-002	-2.439-003	7.426-002	2.890-002
2.00	1.059-002	2.128-002	1.305-001	1.375-001	6.674-003	2.458-002	5.677-002	2.975-002	1.501-002	-3.299-003	7.304-002	2.613-002
2.10	1.058-002	2.174-002	1.256-001	1.416-001	6.477-003	2.616-002	5.402-002	3.177-002	1.411-002	-3.899-003	7.109-002	2.405-002
2.20	1.046-002	2.227-002	1.204-001	1.479-001	6.406-003	2.788-002	5.163-002	3.500-002	1.314-002	-4.214-003	6.857-002	2.283-002
2.30	1.026-002	2.289-002	1.155-001	1.563-001	6.499-003	2.971-002	4.992-002	3.931-002	1.218-002	-4.234-003	6.571-002	2.256-002
2.40	1.000-002	2.361-002	1.115-001	1.668-001	6.784-003	3.161-002	4.918-002	4.451-002	1.130-002	-3.971-003	6.273-002	2.332-002
2.50	9.693-003	2.445-002	1.088-001	1.791-001	7.278-003	3.353-002	4.961-002	5.034-002	1.058-002	-3.452-003	5.986-002	2.510-002
2.60	9.378-003	2.540-002	1.078-001	1.928-001	7.978-003	3.541-002	5.135-002	5.649-002	1.006-002	-2.723-003	5.735-002	2.785-002
2.70	9.066-003	2.649-002	1.088-001	2.076-001	8.873-003	3.720-002	5.447-002	6.264-002	9.803-003	-1.839-003	5.540-002	3.149-002
2.80	8.787-003	2.770-002	1.120-001	2.229-001	9.936-003	3.886-002	5.892-002	6.846-002	9.833-003	-8.643-004	5.417-002	3.585-002
2.90	8.563-003	2.902-002	1.175-001	2.383-001	1.113-002	4.035-002	6.461-002	7.366-002	1.017-002	1.326-004	5.382-002	4.079-002
3.00	8.415-003	3.045-002	1.252-001	2.532-001	1.242-002	4.166-002	7.138-002	7.798-002	1.080-002	1.085-003	5.442-002	4.612-002
3.10	8.359-003	3.197-002	1.350-001	2.674-001	1.375-002	4.276-002	7.900-002	8.122-002	1.172-002	1.930-003	5.605-002	5.165-002
3.20	8.409-003	3.356-002	1.467-001	2.803-001	1.508-002	4.366-002	8.725-002	8.322-002	1.290-002	2.609-003	5.871-002	5.720-002
3.30	8.576-003	3.522-002	1.599-001	2.917-001	1.637-002	4.435-002	9.587-002	8.391-002	1.432-002	3.074-003	6.241-002	6.259-002
3.40	8.872-003	3.693-002	1.746-001	3.014-001	1.757-002	4.487-002	1.046-001	8.322-002	1.592-002	3.280-003	6.710-002	6.765-002
3.50	9.303-003	3.866-002	1.902-001	3.091-001	1.865-002	4.523-002	1.132-001	8.116-002	1.766-002	3.192-003	7.275-002	7.223-002
3.60	9.876-003	4.040-002	2.065-001	3.147-001	1.959-002	4.545-002	1.214-001	7.777-002	1.949-002	2.783-003	7.929-002	7.618-002
3.70	1.060-002	4.213-002	2.232-001	3.181-001	2.035-002	4.558-002	1.290-001	7.315-002	2.137-002	2.030-003	8.663-002	7.936-002
3.80	1.147-002	4.384-002	2.399-001	3.192-001	2.092-002	4.566-002	1.357-001	6.739-002	2.322-002	9.177-004	9.469-002	8.162-002
3.90	1.250-002	4.550-002	2.563-001	3.181-001	2.130-002	4.571-002	1.414-001	6.064-002	2.499-002	-5.607-004	1.033-001	8.285-002
4.00	1.368-002	4.709-002	2.719-001	3.147-001	2.146-002	4.580-002	1.459-001	5.311-002	2.661-002	-2.405-003	1.125-001	8.290-002
4.50	2.171-002	5.287-002	3.249-001	2.685-001	1.975-002	4.823-002	1.451-001	1.269-002	2.991-002	-1.622-002	1.579-001	6.183-002
5.00	3.023-002	5.244-002	3.065-001	2.139-001	1.822-002	5.668-002	1.123-001	-3.913-004	2.004-002	-3.008-002	1.756-001	8.437-003

Table A3b
Pressure Coefficients
$T = 0.2 \quad H = 0.1$

ka	p_1^0		p_2^0		p_3^0		p_1^{90}		p_2^{90}		p_3^{90}	
0.01	4.510-012	-4.500-004	2.005-011	-2.000-003	5.513-012	-5.500-004	-8.684-012	-4.500-004	2.000-011	-2.000-003	-1.061-011	-5.500-004
0.05	2.813-009	-2.249-003	1.250-008	-9.993-003	3.438-009	-2.748-003	2.742-009	-2.250-003	1.249-008	-1.000-002	3.351-009	-2.750-003
0.10	4.473-008	-4.492-003	1.987-007	-1.995-002	5.461-008	-5.481-003	4.485-008	-4.499-003	1.992-007	-2.000-002	5.475-008	-5.499-003
0.15	2.241-007	-6.723-003	9.947-007	-2.982-002	2.732-007	-8.186-003	2.261-007	-6.748-003	1.004-006	-2.999-002	2.757-007	-8.248-003
0.20	6.978-007	-8.936-003	3.095-006	-3.958-002	8.491-007	-1.085-002	7.112-007	-8.995-003	3.154-006	-3.997-002	8.653-007	-1.099-002
0.30	3.386-006	-1.329-002	1.497-005	-5.860-002	4.097-006	-1.599-002	3.546-006	-1.348-002	1.568-005	-5.991-002	4.291-006	-1.648-002
0.40	1.007-005	-1.750-002	4.437-005	-7.671-002	1.210-005	-2.080-002	1.097-005	-1.796-002	4.834-005	-7.980-002	1.318-005	-2.196-002
0.50	2.272-005	-2.152-002	9.959-005	-9.363-002	2.702-005	-2.519-002	2.608-005	-2.243-002	1.143-004	-9.961-002	3.099-005	-2.743-002
0.60	4.265-005	-2.533-002	1.858-004	-1.091-001	5.011-005	-2.905-002	5.234-005	-2.688-002	2.279-004	-1.194-001	6.143-005	-3.288-002
0.70	6.994-005	-2.887-002	3.026-004	-1.229-001	8.104-005	-3.231-002	9.331-005	-3.133-002	4.033-004	-1.390-001	1.079-004	-3.832-002
0.80	1.029-004	-3.213-002	4.419-004	-1.349-001	1.174-004	-3.491-002	1.523-004	-3.576-002	6.525-004	-1.586-001	1.730-004	-4.376-002
0.90	1.378-004	-3.506-002	5.870-004	-1.447-001	1.549-004	-3.676-002	2.321-004	-4.018-002	9.847-004	-1.782-001	2.585-004	-4.919-002
1.00	1.690-004	-3.764-002	7.142-004	-1.524-001	1.871-004	-3.784-002	3.347-004	-4.459-002	1.404-003	-1.976-001	3.644-004	-5.461-002
1.10	1.887-004	-3.984-002	7.935-004	-1.576-001	2.069-004	-3.810-002	4.610-004	-4.901-002	1.910-003	-2.171-001	4.893-004	-6.004-002
1.20	1.885-004	-4.163-002	7.927-004	-1.604-001	2.072-004	-3.751-002	6.106-004	-5.342-002	2.495-003	-2.364-001	6.301-004	-6.547-002
1.30	1.590-004	-4.299-002	6.817-004	-1.606-001	1.825-004	-3.606-002	7.818-004	-5.784-002	3.148-003	-2.558-001	7.823-004	-7.091-002
1.40	9.202-005	-4.389-002	4.376-004	-1.582-001	1.299-004	-3.374-002	9.714-004	-6.227-002	3.849-003	-2.751-001	9.401-004	-7.636-002
1.50	-1.889-005	-4.432-002	4.893-005	-1.531-001	5.067-005	-3.057-002	1.175-003	-6.671-002	4.578-003	-2.944-001	1.097-003	-8.182-002
1.60	-1.771-004	-4.423-002	-4.797-004	-1.452-001	-4.940-005	-2.657-002	1.387-003	-7.116-002	5.309-003	-3.137-001	1.247-003	-8.727-002
1.70	-3.817-004	-4.363-002	-1.126-003	-1.347-001	-1.597-004	-2.177-002	1.600-003	-7.563-002	6.017-003	-3.329-001	1.385-003	-9.272-002
1.80	-6.273-004	-4.249-002	-1.848-003	-1.215-001	-2.656-004	-1.625-002	1.809-003	-8.011-002	6.680-003	-3.520-001	1.506-003	-9.815-002
1.90	-9.037-004	-4.080-002	-2.591-003	-1.058-001	-3.503-004	-1.008-002	2.006-003	-8.458-002	7.284-003	-3.710-001	1.611-003	-1.036-001
2.00	-1.196-003	-3.857-002	-3.291-003	-8.779-002	-3.971-004	-3.365-003	2.186-003	-8.906-002	7.819-003	-3.898-001	1.701-003	-1.089-001
2.10	-1.487-003	-3.580-002	-3.881-003	-6.765-002	-3.926-004	3.790-003	2.345-003	-9.352-002	8.293-003	-4.083-001	1.784-003	-1.142-001
2.20	-1.758-003	-3.252-002	-4.308-003	-4.566-002	-3.295-004	1.125-002	2.482-003	-9.796-002	8.725-003	-4.266-001	1.871-003	-1.195-001
2.30	-1.993-003	-2.875-002	-4.535-003	-2.217-002	-2.092-004	1.887-002	2.599-003	-1.024-001	9.148-003	-4.446-001	1.977-003	-1.247-001
2.40	-2.176-003	-2.453-002	-4.557-003	2.471-003	-4.314-005	2.650-002	2.701-003	-1.067-001	9.610-003	-4.622-001	2.120-003	-1.298-001
2.50	-2.302-003	-1.991-002	-4.399-003	2.788-002	1.472-004	3.400-002	2.796-003	-1.110-001	1.017-002	-4.794-001	2.320-003	-1.348-001
2.60	-2.368-003	-1.495-002	-4.119-003	5.365-002	3.320-004	4.122-002	2.897-003	-1.152-001	1.090-002	-4.961-001	2.596-003	-1.397-001
2.70	-2.382-003	-9.697-003	-3.804-003	7.943-002	4.763-004	4.802-002	3.018-003	-1.194-001	1.186-002	-5.125-001	2.968-003	-1.446-001
2.80	-2.357-003	-4.214-003	-3.559-003	1.048-001	5.439-004	5.430-002	3.174-003	-1.235-001	1.313-002	-5.284-001	3.452-003	-1.495-001
2.90	-2.313-003	1.448-003	-3.496-003	1.296-001	5.013-004	5.995-002	3.382-003	-1.275-001	1.477-002	-5.440-001	4.059-003	-1.543-001
3.00	-2.271-003	7.240-003	-3.722-003	1.533-001	3.223-004	6.487-002	3.660-003	-1.314-001	1.684-002	-5.592-001	4.796-003	-1.591-001
3.10	-2.255-003	1.312-002	-4.326-003	1.759-001	-9.302-006	6.901-002	4.024-003	-1.352-001	1.938-002	-5.742-001	5.667-003	-1.640-001
3.20	-2.287-003	1.905-002	-5.367-003	1.970-001	-4.974-004	7.230-002	4.491-003	-1.390-001	2.243-002	-5.890-001	6.666-003	-1.689-001
3.30	-2.384-003	2.500-002	-6.872-003	2.166-001	-1.133-003	7.470-002	5.076-003	-1.427-001	2.601-002	-6.036-001	7.788-003	-1.738-001
3.40	-2.559-003	3.094-002	-8.827-003	2.344-001	-1.894-003	7.618-002	5.793-003	-1.464-001	3.012-002	-6.182-001	9.018-003	-1.789-001
3.50	-2.816-003	3.686-002	-1.117-002	2.503-001	-2.747-003	7.670-002	6.654-003	-1.501-001	3.477-002	-6.328-001	1.034-002	-1.841-001
3.60	-3.150-003	4.274-002	-1.382-002	2.643-001	-3.649-003	7.624-002	7.670-003	-1.537-001	3.993-002	-6.475-001	1.173-002	-1.894-001
3.70	-3.546-003	4.855-002	-1.682-002	2.761-001	-4.551-003	7.479-002	8.849-003	-1.574-001	4.558-002	-6.624-001	1.316-002	-1.948-001
3.80	-3.980-003	5.428-002	-1.942-002	2.858-001	-5.401-003	7.232-002	1.020-002	-1.611-001	5.165-002	-6.776-001	1.460-002	-2.004-001
3.90	-4.416-003	5.992-002	-2.201-002	2.931-001	-6.148-003	6.882-002	1.172-002	-1.649-001	5.810-002	-6.931-001	1.602-002	-2.062-001
4.00	-4.808-003	6.542-002	-2.419-002	2.979-001	-6.746-003	6.429-002	1.341-002	-1.689-001	6.482-002	-7.090-001	1.738-002	-2.121-001
4.50	-3.998-003	8.925-002	-2.244-002	2.782-001	-6.859-003	2.611-002	2.378-002	-1.914-001	9.787-002	-7.965-001	2.186-002	-2.434-001
5.00	5.369-003	9.800-002	1.731-003	1.693-001	-5.846-003	-3.236-002	3.254-002	-2.210-001	1.137-001	-8.895-001	2.086-002	-2.721-001

Table A4a
Impedance Coefficients
$T = 0.3 \quad H = 0.1$

ka	Z_1		Z_2		Z_3		Z_1		Z_2		Z_3	
0.01	4.526-007	1.303-004	2.248-005	3.292-003	8.289-007	1.691-004	8.634-006	9.512-004	1.225-006	1.133-004	6.379-006	8.191-004
0.05	1.131-005	6.537-004	5.615-004	1.644-002	2.070-005	8.448-004	2.156-004	4.748-003	3.060-005	5.654-004	1.594-004	4.091-003
0.10	4.516-005	1.306-003	2.240-003	3.277-002	8.246-005	1.685-003	8.595-004	9.449-003	1.220-004	1.125-003	6.361-004	8.153-003
0.15	1.013-004	1.954-003	5.016-003	4.888-002	1.843-004	2.515-003	1.923-003	1.406-002	2.733-004	1.671-003	1.426-003	1.216-002
0.20	1.794-004	2.598-003	8.860-003	6.466-002	3.247-004	3.331-003	3.392-003	1.852-002	4.828-004	2.199-003	2.522-003	1.608-002
0.30	3.993-004	3.864-003	1.957-002	9.482-002	7.119-004	4.903-003	7.465-003	2.687-002	1.066-003	3.177-003	5.590-003	2.357-002
0.40	6.990-004	5.091-003	3.390-002	1.225-001	1.220-003	6.371-003	1.286-002	3.418-002	1.847-003	4.016-003	9.735-003	3.041-002
0.50	1.071-003	6.270-003	5.125-002	1.471-001	1.820-003	7.711-003	1.932-002	4.021-002	2.792-003	4.680-003	1.482-002	3.645-002
0.60	1.507-003	7.390-003	7.090-002	1.691-001	2.476-003	8.910-003	2.650-002	4.478-002	3.862-003	5.141-003	2.067-002	4.154-002
0.70	1.996-003	8.446-003	9.207-002	1.853-001	3.152-003	9.962-003	3.406-002	4.781-002	5.014-003	5.381-003	2.711-002	4.558-002
0.80	2.529-003	9.430-003	1.139-001	1.985-001	3.811-003	1.087-002	4.166-002	4.928-002	6.201-003	5.390-003	3.394-002	4.851-002
0.90	3.094-003	1.034-002	1.357-001	2.077-001	4.419-003	1.165-002	4.895-002	4.926-002	7.379-003	5.157-003	4.097-002	5.028-002
1.00	3.679-003	1.117-002	1.566-001	2.131-001	4.947-003	1.232-002	5.561-002	4.789-002	8.502-003	4.720-003	4.798-002	5.091-002
1.10	4.274-003	1.192-002	1.760-001	2.151-001	5.371-003	1.292-002	6.138-002	4.538-002	9.528-003	4.065-003	5.479-002	5.041-002
1.20	4.866-003	1.260-002	1.931-001	2.141-001	5.676-003	1.346-002	6.602-002	4.198-002	1.042-002	3.225-003	6.120-002	4.886-002
1.30	5.444-003	1.319-002	2.074-001	2.108-001	5.854-003	1.399-002	6.938-002	3.800-002	1.114-002	2.232-003	6.704-002	4.635-002
1.40	5.996-003	1.371-002	2.186-001	2.057-001	5.907-003	1.455-002	7.137-002	3.377-002	1.166-002	1.123-003	7.214-002	4.300-002
1.50	6.511-003	1.417-002	2.263-001	1.996-001	5.848-003	1.517-002	7.199-002	2.966-002	1.196-002	-5.825-005	7.637-002	3.897-002
1.60	6.976-003	1.456-002	2.305-001	1.934-001	5.696-003	1.588-002	7.130-002	2.601-002	1.203-002	-1.265-003	7.960-002	3.443-002
1.70	7.381-003	1.490-002	2.312-001	1.879-001	5.483-003	1.671-002	6.947-002	2.315-002	1.187-002	-2.444-003	8.175-002	2.959-002
1.80	7.717-003	1.520-002	2.288-001	1.839-001	5.246-003	1.769-002	6.676-002	2.137-002	1.149-002	-3.545-003	8.277-002	2.469-002
1.90	7.975-003	1.547-002	2.235-001	1.823-001	5.026-003	1.880-002	6.348-002	2.090-002	1.091-002	-4.518-003	8.268-002	1.998-002
2.00	8.150-003	1.573-002	2.162-001	1.835-001	4.867-003	2.006-002	6.001-002	2.186-002	1.017-002	-5.318-003	8.152-002	1.568-002
2.10	8.241-003	1.599-002	2.077-001	1.882-001	4.812-003	2.145-002	5.676-002	2.429-002	9.306-003	-5.979-003	7.943-002	1.204-002
2.20	8.249-003	1.628-002	1.987-001	1.965-001	4.894-003	2.292-002	5.414-002	2.808-002	8.384-003	-6.271-003	7.657-002	9.251-003
2.30	8.182-003	1.662-002	1.903-001	2.084-001	5.139-003	2.445-002	5.253-002	3.304-002	7.460-003	-6.395-003	7.316-002	7.471-003
2.40	8.050-003	1.701-002	1.834-001	2.237-001	5.561-003	2.599-002	5.221-002	3.888-002	6.594-003	-6.289-003	6.946-002	6.795-003
2.50	7.864-003	1.747-002	1.788-001	2.420-001	6.157-003	2.749-002	5.340-002	4.522-002	5.842-003	-5.978-003	6.571-002	7.258-003
2.60	7.642-003	1.801-002	1.771-001	2.626-001	6.913-003	2.891-002	5.618-002	5.167-002	5.250-003	-5.497-003	6.219-002	8.830-003
2.70	7.400-003	1.864-002	1.787-001	2.848-001	7.803-003	3.020-002	6.055-002	5.782-002	4.852-003	-4.893-003	5.912-002	1.143-002
2.80	7.156-003	1.936-002	1.840-001	3.077-001	8.793-003	3.135-002	6.639-002	6.330-002	4.671-003	-4.216-003	5.670-002	1.492-002
2.90	6.924-003	2.017-002	1.928-001	3.306-001	9.843-003	3.233-002	7.349-002	6.780-002	4.716-003	-3.521-003	5.510-002	1.914-002
3.00	6.721-003	2.106-002	2.052-001	3.527-001	1.091-002	3.314-002	8.161-002	7.107-002	4.984-003	-2.858-003	5.443-002	2.391-002
3.10	6.560-003	2.204-002	2.209-001	3.734-001	1.196-002	3.378-002	9.046-002	7.292-002	5.463-003	-2.275-003	5.477-002	2.905-002
3.20	6.452-003	2.308-002	2.394-001	3.922-001	1.295-002	3.426-002	9.973-002	7.326-002	6.130-003	-1.815-003	5.617-002	3.438-002
3.30	6.409-003	2.419-002	2.604-001	4.086-001	1.385-002	3.461-002	1.091-001	7.204-002	6.960-003	-1.514-003	5.863-002	3.971-002
3.40	6.440-003	2.536-002	2.835-001	4.222-001	1.463-002	3.484-002	1.183-001	6.927-002	7.920-003	-1.402-003	6.216-002	4.489-002
3.50	6.554-003	2.658-002	3.081-001	4.328-001	1.529-002	3.499-002	1.271-001	6.501-002	8.975-003	-1.505-003	6.672-002	4.974-002
3.60	6.760-003	2.784-002	3.339-001	4.402-001	1.579-002	3.509-002	1.351-001	5.938-002	1.009-002	-1.843-003	7.228-002	5.412-002
3.70	7.065-003	2.912-002	3.602-001	4.442-001	1.613-002	3.517-002	1.422-001	5.250-002	1.122-002	-2.432-003	7.880-002	5.787-002
3.80	7.479-003	3.043-002	3.866-001	4.446-001	1.632-002	3.527-002	1.480-001	4.456-002	1.232-002	-3.282-003	8.622-002	6.083-002
3.90	8.010-003	3.174-002	4.125-001	4.416-001	1.636-002	3.542-002	1.526-001	3.575-002	1.335-002	-4.398-003	9.445-002	6.285-002
4.00	8.666-003	3.304-002	4.375-001	4.349-001	1.626-002	3.566-002	1.555-001	2.632-002	1.425-002	-5.780-003	1.034-001	6.376-002
4.50	1.395-002	3.858-002	5.246-001	3.547-001	1.461-002	3.920-002	1.440-001	-1.654-002	1.484-002	-1.588-002	1.523-001	4.594-002
5.00	2.116-002	3.909-002	4.991-001	2.577-001	1.541-002	4.695-002	1.040-001	-2.512-002	5.260-003	-2.496-002	1.778-001	-1.191-002

Table A4b
Pressure Coefficients
$T = 0.3 \quad H = 0.1$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	3.397-012 -4.250-004	4.516-011 -3.000-003	8.655-012 -5.750-004	-6.080-012 -4.250-004	4.496-011 -3.000-003	-8.227-012 -5.750-004
0.05	3.991-009 -2.124-003	2.816-008 -1.499-002	5.397-009 -2.872-003	3.914-009 -2.125-003	2.808-008 -1.500-002	5.294-009 -2.875-003
0.10	6.346-008 -4.243-003	4.476-007 -2.992-002	8.574-008 -5.728-003	6.350-008 -4.249-003	4.480-007 -2.999-002	8.579-008 -5.749-003
0.15	3.180-007 -6.352-003	2.241-006 -4.473-002	4.289-007 -8.551-003	3.202-007 -6.372-003	2.257-006 -4.498-002	4.318-007 -8.622-003
0.20	9.910-007 -8.446-003	6.974-006 -5.936-002	1.333-006 -1.133-002	1.007-006 -8.493-003	7.088-006 -5.995-002	1.354-006 -1.149-002
0.30	4.816-006 -1.257-002	3.377-005 -8.785-002	6.430-006 -1.666-002	5.023-006 -1.273-002	3.522-005 -8.982-002	6.706-006 -1.723-002
0.40	1.436-005 -1.658-002	1.002-004 -1.149-001	1.898-005 -2.162-002	1.555-005 -1.695-002	1.085-004 -1.196-001	2.055-005 -2.294-002
0.50	3.251-005 -2.043-002	2.253-004 -1.402-001	4.240-005 -2.609-002	3.698-005 -2.116-002	2.562-004 -1.492-001	4.820-005 -2.865-002
0.60	6.131-005 -2.411-002	4.215-004 -1.633-001	7.869-005 -2.997-002	7.428-005 -2.535-002	5.104-004 -1.787-001	9.522-005 -3.433-002
0.70	1.012-004 -2.757-002	6.891-004 -1.839-001	1.275-004 -3.317-002	1.326-004 -2.952-002	9.021-004 -2.081-001	1.666-004 -4.001-002
0.80	1.501-004 -3.079-002	1.012-003 -2.016-001	1.854-004 -3.561-002	2.168-004 -3.368-002	1.458-003 -2.373-001	2.662-004 -4.567-002
0.90	2.035-004 -3.376-002	1.357-003 -2.162-001	2.458-004 -3.723-002	3.311-004 -3.783-002	2.198-003 -2.664-001	3.958-004 -5.133-002
1.00	2.536-004 -3.644-002	1.674-003 -2.275-001	3.000-004 -3.798-002	4.787-004 -4.197-002	3.131-003 -2.954-001	5.552-004 -5.700-002
1.10	2.904-004 -3.881-002	1.899-003 -2.353-001	3.376-004 -3.782-002	6.613-004 -4.612-002	4.256-003 -3.243-001	7.414-004 -6.267-002
1.20	3.016-004 -4.086-002	1.966-003 -2.393-001	3.489-004 -3.673-002	8.789-004 -5.026-002	5.557-003 -3.532-001	9.491-004 -6.835-002
1.30	2.743-004 -4.255-002	1.809-003 -2.395-001	3.266-004 -3.469-002	1.130-003 -5.443-002	7.006-003 -3.821-001	1.171-003 -7.405-002
1.40	1.961-004 -4.386-002	1.380-003 -2.357-001	2.677-004 -3.171-002	1.410-003 -5.861-002	8.562-003 -4.109-001	1.397-003 -7.977-002
1.50	5.657-005 -4.476-002	6.518-004 -2.279-001	1.751-004 -2.780-002	1.713-003 -6.281-002	1.018-002 -4.398-001	1.617-003 -8.549-002
1.60	-1.507-004 -4.523-002	-3.677-004 -2.159-001	5.882-005 -2.301-002	2.031-003 -6.704-002	1.179-002 -4.686-001	1.823-003 -9.123-002
1.70	-4.268-004 -4.523-002	-1.634-003 -1.999-001	-6.475-005 -1.739-002	2.354-003 -7.130-002	1.335-002 -4.973-001	2.005-003 -9.695-002
1.80	-7.663-004 -4.475-002	-3.063-003 -1.799-001	-1.740-004 -1.102-002	2.671-003 -7.559-002	1.480-002 -5.259-001	2.160-003 -1.027-001
1.90	-1.157-003 -4.376-002	-4.543-003 -1.561-001	-2.452-004 -4.014-003	2.972-003 -7.990-002	1.612-002 -5.543-001	2.289-003 -1.083-001
2.00	-1.580-003 -4.225-002	-5.942-003 -1.287-001	-2.563-004 3.509-003	3.246-003 -8.422-002	1.727-002 -5.823-001	2.398-003 -1.139-001
2.10	-2.012-003 -4.021-002	-7.130-003 -9.810-002	-1.920-004 1.139-002	3.486-003 -8.854-002	1.828-002 -6.100-001	2.500-003 -1.194-001
2.20	-2.425-003 -3.766-002	-8.000-003 -6.482-002	-4.747-005 1.948-002	3.688-003 -9.284-002	1.920-002 -6.370-001	2.617-003 -1.249-001
2.30	-2.796-003 -3.463-002	-8.489-003 -2.938-002	1.683-004 2.758-002	3.850-003 -9.711-002	2.009-002 -6.634-001	2.774-003 -1.302-001
2.40	-3.103-003 -3.113-002	-8.593-003 7.641-003	4.317-004 3.553-002	3.980-003 -1.013-001	2.108-002 -6.891-001	3.001-003 -1.354-001
2.50	-3.331-003 -2.722-002	-8.374-003 4.561-002	7.059-004 4.314-002	4.085-003 -1.055-001	2.229-002 -7.140-001	3.328-003 -1.405-001
2.60	-3.475-003 -2.294-002	-7.957-003 8.390-002	9.450-004 5.027-002	4.181-003 -1.096-001	2.387-002 -7.380-001	3.785-003 -1.456-001
2.70	-3.541-003 -1.835-002	-7.517-003 1.219-001	1.099-003 5.677-002	4.287-003 -1.135-001	2.598-002 -7.612-001	4.397-003 -1.505-001
2.80	-3.541-003 -1.351-002	-7.254-003 1.592-001	1.121-003 6.252-002	4.423-003 -1.174-001	2.875-002 -7.837-001	5.181-003 -1.555-001
2.90	-3.496-003 -8.444-003	-7.375-003 1.952-001	9.730-004 6.744-002	4.611-003 -1.212-001	3.232-002 -8.055-001	6.150-003 -1.604-001
3.00	-3.432-003 -3.212-003	-8.066-003 2.296-001	6.282-004 7.143-002	4.876-003 -1.248-001	3.680-002 -8.266-001	7.305-003 -1.654-001
3.10	-3.375-003 2.155-003	-9.471-003 2.620-001	7.773-005 7.446-002	5.241-003 -1.284-001	4.228-002 -8.474-001	8.643-003 -1.705-001
3.20	-3.351-003 7.631-003	-1.168-002 2.922-001	-6.710-004 7.648-002	5.728-003 -1.318-001	4.882-002 -8.678-001	1.015-002 -1.757-001
3.30	-3.384-003 1.319-002	-1.471-002 3.200-001	-1.594-003 7.746-002	6.359-003 -1.352-001	5.647-002 -8.880-001	1.181-002 -1.810-001
3.40	-3.488-003 1.883-002	-1.852-002 3.451-001	-2.652-003 7.739-002	7.156-003 -1.386-001	6.523-002 -9.082-001	1.359-002 -1.865-001
3.50	-3.673-003 2.452-002	-2.298-002 3.676-001	-3.794-003 7.624-002	8.140-003 -1.418-001	7.511-002 -9.285-001	1.546-002 -1.922-001
3.60	-3.938-003 3.027-002	-2.791-002 3.871-001	-4.963-003 7.401-002	9.328-003 -1.451-001	8.607-002 -9.491-001	1.739-002 -1.981-001
3.70	-4.272-003 3.607-002	-3.306-002 4.036-001	-6.097-003 7.070-002	1.074-002 -1.484-001	9.805-002 -9.701-001	1.933-002 -2.043-001
3.80	-4.653-003 4.191-002	-3.813-002 4.169-001	-7.134-003 6.631-002	1.239-002 -1.517-001	1.110-001 -9.918-001	2.123-002 -2.106-001
3.90	-5.049-003 4.778-002	-4.281-002 4.268-001	-8.021-003 6.084-002	1.429-002 -1.551-001	1.247-001 -1.014+000	2.304-002 -2.173-001
4.00	-5.414-003 5.365-002	-4.674-002 4.332-001	-8.713-003 5.429-002	1.645-002 -1.586-001	1.391-001 -1.038+000	2.471-002 -2.241-001
4.50	-4.618-003 8.175-002	-4.461-002 4.016-001	-9.031-003 6.658-003	3.057-002 -1.803-001	2.107-001 -1.174+000	2.898-002 -2.600-001
5.00	4.956-003 9.881-002	-5.221-003 2.398-001	-8.960-003 -5.557-002	4.394-002 -2.130-001	2.470-001 -1.326+000	2.587-002 -2.904-001

Table A5a
Impedance Coefficients
$T = 0.5 \quad H = 0.1$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	2.332-007	7.683-005	4.168-005	5.489-003	6.511-007	1.251-004	1.042-005	1.006-003	7.794-007	6.272-005	6.235-006	7.454-004
0.05	5.828-006	3.840-004	1.041-003	2.741-002	1.625-005	6.247-004	2.601-004	5.022-003	1.947-005	3.129-004	1.558-004	3.722-003
0.10	2.328-005	7.673-004	4.151-003	5.461-002	6.471-005	1.245-003	1.037-003	9.982-003	7.763-005	6.217-004	6.217-004	7.417-003
0.15	5.226-005	1.149-003	9.293-003	8.138-002	1.445-004	1.858-003	2.317-003	1.482-002	1.738-004	9.229-004	1.394-003	1.106-002
0.20	9.261-005	1.529-003	1.640-002	1.075-001	2.540-004	2.458-003	4.083-003	1.948-002	3.068-004	1.210-003	2.465-003	1.462-002
0.30	2.065-004	2.278-003	3.618-002	1.571-001	5.541-004	3.607-003	8.954-003	2.804-002	6.765-004	1.733-003	5.466-003	2.139-002
0.40	3.626-004	3.011-003	6.256-002	2.021-001	9.432-004	4.670-003	1.536-002	3.528-002	1.169-003	2.164-003	9.525-003	2.755-002
0.50	5.579-004	3.721-003	9.436-002	2.412-001	1.394-003	5.628-003	2.294-002	4.091-002	1.763-003	2.478-003	1.451-002	3.294-002
0.60	7.890-004	4.406-003	1.302-001	2.738-001	1.876-003	6.473-003	3.125-002	4.474-002	2.431-003	2.659-003	2.027-002	3.743-002
0.70	1.052-003	5.062-003	1.687-001	2.991-001	2.358-003	7.204-003	3.987-002	4.668-002	3.146-003	2.693-003	2.664-002	4.091-002
0.80	1.344-003	5.686-003	2.082-001	3.172-001	2.810-003	7.831-003	4.834-002	4.677-002	3.876-003	2.576-003	3.344-002	4.331-002
0.90	1.659-003	6.276-003	2.474-001	3.281-001	3.207-003	8.369-003	5.625-002	4.513-002	4.591-003	2.305-003	4.049-002	4.460-002
1.00	1.996-003	6.829-003	2.849-001	3.322-001	3.526-003	8.840-003	6.323-002	4.197-002	5.263-003	1.886-003	4.762-002	4.476-002
1.10	2.349-003	7.343-003	3.194-001	3.301-001	3.755-003	9.271-003	6.896-002	3.760-002	5.863-003	1.329-003	5.465-002	4.378-002
1.20	2.714-003	7.817-003	3.497-001	3.227-001	3.887-003	9.692-003	7.322-002	3.235-002	6.364-003	6.472-004	6.141-002	4.170-002
1.30	3.088-003	8.248-003	3.750-001	3.110-001	3.924-003	1.013-002	7.585-002	2.664-002	6.742-003	-1.384-004	6.770-002	3.857-002
1.40	3.463-003	8.635-003	3.945-001	2.962-001	3.875-003	1.063-002	7.680-002	2.089-002	6.975-003	-1.004-003	7.337-002	3.446-002
1.50	3.835-003	8.977-003	4.076-001	2.798-001	3.760-003	1.120-002	7.612-002	1.555-002	7.046-003	-1.919-003	7.824-002	2.950-002
1.60	4.196-003	9.273-003	4.143-001	2.632-001	3.606-003	1.186-002	7.397-002	1.104-002	6.945-003	-2.850-003	8.215-002	2.382-002
1.70	4.538-003	9.524-003	4.147-001	2.479-001	3.444-003	1.264-002	7.065-002	7.756-003	6.668-003	-3.759-003	8.496-002	1.760-002
1.80	4.854-003	9.733-003	4.092-001	2.356-001	3.313-003	1.353-002	6.653-002	5.997-003	6.219-003	-4.607-003	8.657-002	1.108-002
1.90	5.135-003	9.905-003	3.988-001	2.276-001	3.247-003	1.453-002	6.208-002	5.956-003	5.616-003	-5.353-003	8.693-002	4.494-003
2.00	5.374-003	1.005-002	3.848-001	2.250-001	3.282-003	1.561-002	5.783-002	7.684-003	4.884-003	-5.965-003	8.604-002	-1.879-003
2.10	5.564-003	1.016-002	3.687-001	2.287-001	3.443-003	1.675-002	5.429-002	1.108-002	4.059-003	-6.412-003	8.397-002	-7.771-003
2.20	5.702-003	1.027-002	3.522-001	2.390-001	3.745-003	1.789-002	5.195-002	1.588-002	3.184-003	-6.679-003	8.086-002	-1.293-002
2.30	5.786-003	1.038-002	3.371-001	2.557-001	4.190-003	1.901-002	5.118-002	2.169-002	2.304-003	-6.761-003	7.690-002	-1.716-002
2.40	5.817-003	1.049-002	3.250-001	2.783-001	4.766-003	2.006-002	5.224-002	2.804-002	1.464-003	-6.664-003	7.236-002	-2.030-002
2.50	5.799-003	1.063-002	3.172-001	3.058-001	5.449-003	2.101-002	5.519-002	3.440-002	7.069-004	-6.409-003	6.748-002	-2.227-002
2.60	5.738-003	1.080-002	3.148-001	3.368-001	6.208-003	2.183-002	6.000-002	4.025-002	6.299-005	-6.025-003	6.253-002	-2.307-002
2.70	5.643-003	1.101-002	3.183-001	3.701-001	7.004-003	2.251-002	6.645-002	4.514-002	-4.432-004	-5.546-003	5.778-002	-2.275-002
2.80	5.520-003	1.126-002	3.280-001	4.042-001	7.799-003	2.304-002	7.425-002	4.869-002	-7.990-004	-5.010-003	5.342-002	-2.140-002
2.90	5.378-003	1.155-002	3.437-001	4.378-001	8.558-003	2.344-002	8.304-002	5.065-002	-1.001-003	-4.455-003	4.963-002	-1.916-002
3.00	5.227-003	1.190-002	3.653-001	4.698-001	9.247-003	2.371-002	9.243-002	5.083-002	-1.054-003	-3.915-003	4.656-002	-1.618-002
3.10	5.072-003	1.229-002	3.920-001	4.990-001	9.843-003	2.389-002	1.020-001	4.916-002	-9.689-004	-3.422-003	4.431-002	-1.261-002
3.20	4.921-003	1.272-002	4.234-001	5.247-001	1.033-002	2.400-002	1.114-001	4.566-002	-7.622-004	-3.003-003	4.293-002	-8.610-003
3.30	4.781-003	1.320-002	4.586-001	5.462-001	1.069-002	2.407-002	1.203-001	4.041-002	-4.536-004	-2.681-003	4.248-002	-4.344-003
3.40	4.657-003	1.373-002	4.970-001	5.629-001	1.092-002	2.414-002	1.282-001	3.356-002	-6.557-005	-2.474-003	4.298-002	4.251-005
3.50	4.555-003	1.430-002	5.377-001	5.744-001	1.102-002	2.422-002	1.350-001	2.528-002	3.769-004	-2.399-003	4.445-002	4.400-003
3.60	4.481-003	1.491-002	5.799-001	5.804-001	1.102-002	2.436-002	1.403-001	1.584-002	8.468-004	-2.466-003	4.688-002	8.582-003
3.70	4.441-003	1.556-002	6.228-001	5.805-001	1.091-002	2.458-002	1.440-001	5.491-003	1.315-003	-2.681-003	5.026-002	1.243-002
3.80	4.441-003	1.624-002	6.654-001	5.747-001	1.072-002	2.490-002	1.458-001	-5.423-003	1.751-003	-3.048-003	5.457-002	1.580-002
3.90	4.487-003	1.696-002	7.067-001	5.628-001	1.048-002	2.535-002	1.457-001	-1.654-002	2.121-003	-3.565-003	5.974-002	1.851-002
4.00	4.586-003	1.770-002	7.457-001	5.451-001	1.022-002	2.593-002	1.436-001	-2.746-002	2.390-003	-4.222-003	6.570-002	2.041-002
4.50	6.042-003	2.151-002	8.680-001	3.883-001	9.948-003	3.074-002	1.078-001	-6.430-002	1.130-003	-8.735-003	1.019-001	1.213-002
5.00	9.039-003	2.446-002	8.214-001	2.340-001	1.336-002	3.572-002	6.844-002	-5.075-002	-5.254-003	-1.119-002	1.257-001	-2.883-002

Table A5b
Pressure Coefficients
$T = 0.5 \quad H = 0.1$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	9.403-012 -3.750-004	1.254-010 -5.000-003	1.567-011 -6.250-004	-1.608-012 -3.750-004	1.250-010 -5.000-003	-2.681-012 -6.250-004
0.05	5.865-009 -1.874-003	7.818-008 -2.498-002	9.770-009 -3.121-003	5.900-009 -1.875-003	7.807-008 -2.500-002	9.662-009 -3.125-003
0.10	9.329-008 -3.745-003	1.242-006 -4.986-002	1.551-007 -6.222-003	9.349-008 -3.749-003	1.245-006 -4.998-002	1.555-007 -6.248-003
0.15	4.676-007 -5.609-003	6.219-006 -7.452-002	7.755-007 -9.280-003	4.715-007 -5.621-003	6.272-006 -7.494-002	7.820-007 -9.370-003
0.20	1.457-006 -7.463-003	1.935-005 -9.886-002	2.408-006 -1.227-002	1.483-006 -7.491-003	1.968-005 -9.987-002	2.450-006 -1.249-002
0.30	7.087-006 -1.113-002	9.358-005 -1.462-001	1.158-005 -1.799-002	7.398-006 -1.122-002	9.768-005 -1.496-001	1.209-005 -1.871-002
0.40	2.117-005 -1.471-002	2.774-004 -1.911-001	3.407-005 -2.323-002	2.291-005 -1.493-002	3.003-004 -1.990-001	3.688-005 -2.491-002
0.50	4.800-005 -1.819-002	6.231-004 -2.328-001	7.579-005 -2.784-002	5.454-005 -1.862-002	7.076-004 -2.481-001	8.603-005 -3.109-002
0.60	9.082-005 -2.156-002	1.165-003 -2.707-001	1.401-004 -3.170-002	1.097-004 -2.229-002	1.406-003 -2.969-001	1.688-004 -3.725-002
0.70	1.505-004 -2.479-002	1.906-003 -3.043-001	2.259-004 -3.471-002	1.962-004 -2.594-002	2.479-003 -3.454-001	2.932-004 -4.339-002
0.80	2.249-004 -2.787-002	2.805-003 -3.331-001	3.272-004 -3.678-002	3.215-004 -2.957-002	3.997-003 -3.936-001	4.644-004 -4.953-002
0.90	3.076-004 -3.080-002	3.776-003 -3.567-001	4.331-004 -3.785-002	4.927-004 -3.319-002	6.011-003 -4.416-001	6.840-004 -5.568-002
1.00	3.883-004 -3.355-002	4.691-003 -3.747-001	5.290-004 -3.786-002	7.153-004 -3.681-002	8.544-003 -4.894-001	9.493-004 -6.184-002
1.10	4.528-004 -3.613-002	5.393-003 -3.867-001	5.995-004 -3.678-002	9.930-004 -4.043-002	1.159-002 -5.372-001	1.253-003 -6.802-002
1.20	4.839-004 -3.850-002	5.714-003 -3.926-001	6.307-004 -3.459-002	1.327-003 -4.406-002	1.510-002 -5.850-001	1.584-003 -7.424-002
1.30	4.625-004 -4.065-002	5.496-003 -3.921-001	6.142-004 -3.130-002	1.717-003 -4.773-002	1.900-002 -6.329-001	1.926-003 -8.050-002
1.40	3.696-004 -4.255-002	4.621-003 -3.849-001	5.499-004 -2.692-002	2.157-003 -5.143-002	2.318-002 -6.809-001	2.263-003 -8.679-002
1.50	1.887-004 -4.418-002	3.032-003 -3.709-001	4.477-004 -2.151-002	2.640-003 -5.519-002	2.749-002 -7.299-001	2.576-003 -9.311-002
1.60	-9.218-005 -4.550-002	7.559-004 -3.499-001	3.285-004 -1.514-002	3.153-003 -5.900-002	3.179-002 -7.773-001	2.849-003 -9.944-002
1.70	-4.773-004 -4.646-002	-2.089-003 -3.221-001	2.217-004 -7.917-003	3.680-003 -6.289-002	3.591-002 -8.255-001	3.073-003 -1.057-001
1.80	-9.616-004 -4.704-002	-5.295-003 -2.876-001	1.620-004 2.882-005	4.202-003 -6.684-002	3.972-002 -8.735-001	3.246-003 -1.120-001
1.90	-1.530-003 -4.719-002	-8.590-003 -2.467-001	1.823-004 8.522-003	4.700-003 -7.087-002	4.313-002 -9.211-001	3.376-003 -1.182-001
2.00	-2.156-003 -4.689-002	-1.167-002 -2.000-001	3.068-004 1.736-002	5.152-003 -7.495-002	4.610-002 -9.681-001	3.486-003 -1.243-001
2.10	-2.805-003 -4.612-002	-1.426-002 -1.482-001	5.439-004 2.632-002	5.542-003 -7.907-002	4.869-002 -1.014+000	3.608-003 -1.302-001
2.20	-3.441-003 -4.487-002	-1.615-002 -9.228-002	8.810-004 3.517-002	5.856-003 -8.321-002	5.104-002 -1.059+000	3.788-003 -1.360-001
2.30	-4.025-003 -4.315-002	-1.725-002 -3.322-002	1.284-003 4.368-002	6.086-003 -8.735-002	5.338-002 -1.102+000	4.076-003 -1.416-001
2.40	-4.523-003 -4.100-002	-1.761-002 2.783-002	1.698-003 5.162-002	6.235-003 -9.145-002	5.602-002 -1.143+000	4.524-003 -1.471-001
2.50	-4.911-003 -3.845-002	-1.743-002 8.975-002	2.059-003 5.879-002	6.310-003 -9.549-002	5.932-002 -1.183+000	5.180-003 -1.525-001
2.60	-5.179-003 -3.553-002	-1.699-002 1.515-001	2.298-003 6.504-002	6.327-003 -9.945-002	6.366-002 -1.221+000	6.083-003 -1.579-001
2.70	-5.325-003 -3.231-002	-1.668-002 2.121-001	2.355-003 7.023-002	6.307-003 -1.033-001	6.940-002 -1.257+000	7.257-003 -1.632-001
2.80	-5.361-003 -2.881-002	-1.688-002 2.708-001	2.185-003 7.427-002	6.276-003 -1.070-001	7.689-002 -1.292+000	8.714-003 -1.686-001
2.90	-5.308-003 -2.509-002	-1.793-002 3.269-001	1.763-003 7.709-002	6.263-003 -1.106-001	8.642-002 -1.325+000	1.045-002 -1.741-001
3.00	-5.190-003 -2.117-002	-2.010-002 3.799-001	1.090-003 7.865-002	6.296-003 -1.141-001	9.825-002 -1.357+000	1.244-002 -1.798-001
3.10	-5.035-003 -1.707-002	-2.354-002 4.294-001	1.886-004 7.892-002	6.407-003 -1.174-001	1.126-001 -1.388+000	1.466-002 -1.857-001
3.20	-4.870-003 -1.282-002	-2.830-002 4.750-001	-8.990-004 7.791-002	6.626-003 -1.206-001	1.295-001 -1.419+000	1.706-002 -1.919-001
3.30	-4.720-003 -8.422-003	-3.428-002 5.164-001	-2.115-003 7.561-002	6.985-003 -1.236-001	1.492-001 -1.450+000	1.958-002 -1.984-001
3.40	-4.605-003 -3.881-003	-4.127-002 5.534-001	-3.393-003 7.203-002	7.513-003 -1.266-001	1.715-001 -1.481+000	2.216-002 -2.053-001
3.50	-4.531-003 8.004-004	-4.895-002 5.858-001	-4.664-003 6.720-002	8.243-003 -1.295-001	1.966-001 -1.513+000	2.473-002 -2.126-001
3.60	-4.508-003 5.624-003	-5.693-002 6.133-001	-5.860-003 6.114-002	9.205-003 -1.323-001	2.243-001 -1.546+000	2.721-002 -2.203-001
3.70	-4.529-003 1.059-002	-6.474-002 6.356-001	-6.925-003 5.389-002	1.043-002 -1.351-001	2.543-001 -1.581+000	2.951-002 -2.283-001
3.80	-4.582-003 1.570-002	-7.190-002 6.523-001	-7.815-003 4.552-002	1.194-002 -1.379-001	2.865-001 -1.618+000	3.155-002 -2.367-001
3.90	-4.647-003 2.094-002	-7.792-002 6.632-001	-8.503-003 3.609-002	1.376-002 -1.408-001	3.204-001 -1.658+000	3.323-002 -2.454-001
4.00	-4.695-003 2.630-002	-8.238-002 6.679-001	-8.984-003 2.569-002	1.591-002 -1.438-001	3.556-001 -1.700+000	3.448-002 -2.543-001
4.50	-3.575-003 5.366-002	-7.336-002 5.844-001	-9.222-003 -3.529-002	3.108-002 -1.633-001	5.229-001 -1.959+000	3.298-002 -2.976-001
5.00	8.947-004 7.654-002	-2.832-002 3.197-001	-8.596-003 -8.969-002	4.706-002 -1.958-001	6.097-001 -2.249+000	2.602-002 -3.275-001

Table A6a
Impedance Coefficients
$T = 0.05 \quad H = 0.2$

ka	Z_1		Z_2		Z_3		Z_1'		Z_2'		Z_3'	
0.01	3.788-006	8.686-004	9.995-007	1.840-004	4.215-006	8.182-004	4.105-006	5.283-004	7.992-006	8.898-004	3.892-006	5.500-004
0.05	9.464-005	4.341-003	2.497-005	9.190-004	1.053-004	4.087-003	1.025-004	2.638-003	1.996-004	4.443-003	9.722-005	2.747-003
0.10	3.778-004	8.665-003	9.961-005	1.833-003	4.197-004	8.152-003	4.090-004	5.256-003	7.965-004	8.847-003	3.880-004	5.476-003
0.15	8.474-004	1.296-002	2.232-004	2.738-003	9.394-004	1.217-002	9.158-004	7.831-003	1.785-003	1.317-002	8.698-004	8.171-003
0.20	1.500-003	1.721-002	3.944-004	3.628-003	1.658-003	1.613-002	1.617-003	1.035-002	3.154-003	1.739-002	1.538-003	1.081-002
0.30	3.332-003	2.551-002	8.722-004	5.348-003	3.652-003	2.376-002	3.570-003	1.511-002	6.977-003	2.532-002	3.409-003	1.588-002
0.40	5.819-003	3.345-002	1.514-003	6.960-003	6.304-003	3.090-002	6.179-003	1.941-002	1.211-002	3.240-002	5.936-003	2.054-002
0.50	8.888-003	4.095-002	2.294-003	8.436-003	9.484-003	3.742-002	9.328-003	2.313-002	1.835-002	3.837-002	9.030-003	2.471-002
0.60	1.245-002	4.791-002	3.181-003	9.754-003	1.304-002	4.325-002	1.288-002	2.618-002	2.548-002	4.307-002	1.259-002	2.828-002
0.70	1.640-002	5.427-002	4.142-003	1.090-002	1.680-002	4.833-002	1.668-002	2.849-002	3.319-002	4.636-002	1.648-002	3.121-002
0.80	2.064-002	5.999-002	5.140-003	1.186-002	2.059-002	5.266-002	2.057-002	3.006-002	4.121-002	4.818-002	2.060-002	3.343-002
0.90	2.504-002	6.503-002	6.139-003	1.264-002	2.425-002	5.626-002	2.440-002	3.089-002	4.925-002	4.851-002	2.479-002	3.494-002
1.00	2.949-002	6.940-002	7.102-003	1.325-002	2.760-002	5.921-002	2.799-002	3.103-002	5.700-002	4.740-002	2.894-002	3.575-002
1.10	3.387-002	7.310-002	7.995-003	1.369-002	3.052-002	6.160-002	3.122-002	3.056-002	6.419-002	4.494-002	3.290-002	3.588-002
1.20	3.806-002	7.616-002	8.788-003	1.400-002	3.288-002	6.358-002	3.397-002	2.958-002	7.057-002	4.130-002	3.656-002	3.539-002
1.30	4.196-002	7.863-002	9.455-003	1.419-002	3.461-002	6.530-002	3.613-002	2.822-002	7.591-002	3.667-002	3.980-002	3.437-002
1.40	4.545-002	8.059-002	9.974-003	1.429-002	3.566-002	6.693-002	3.764-002	2.663-002	8.002-002	3.132-002	4.253-002	3.289-002
1.50	4.845-002	8.212-002	1.033-002	1.435-002	3.603-002	6.868-002	3.847-002	2.500-002	8.280-002	2.552-002	4.467-002	3.110-002
1.60	5.088-002	8.334-002	1.052-002	1.440-002	3.577-002	7.071-002	3.863-002	2.347-002	8.416-002	1.960-002	4.616-002	2.911-002
1.70	5.267-002	8.437-002	1.065-002	1.449-002	3.497-002	7.321-002	3.816-002	2.224-002	8.412-002	1.389-002	4.698-002	2.708-002
1.80	5.381-002	8.534-002	1.043-002	1.464-002	3.377-002	7.633-002	3.716-002	2.145-002	8.276-002	8.729-003	4.713-002	2.516-002
1.90	5.428-002	8.642-002	1.017-002	1.490-002	3.235-002	8.017-002	3.576-002	2.124-002	8.025-002	4.422-003	4.665-002	2.351-002
2.00	5.412-002	8.776-002	9.821-003	1.530-002	3.091-002	8.479-002	3.412-002	2.171-002	7.684-002	1.243-003	4.562-002	2.228-002
2.10	5.339-002	8.949-002	9.408-003	1.586-002	2.968-002	9.020-002	3.244-002	2.291-002	7.284-002	-5.992-004	4.416-002	2.158-002
2.20	5.219-002	9.174-002	8.977-003	1.660-002	2.887-002	9.634-002	3.091-002	2.484-002	6.860-002	-9.811-004	4.240-002	2.151-002
2.30	5.064-002	9.463-002	8.574-003	1.751-002	2.868-002	1.031-001	2.973-002	2.745-002	6.451-002	1.241-004	4.050-002	2.213-002
2.40	4.889-002	9.822-002	8.241-003	1.858-002	2.926-002	1.103-001	2.908-002	3.064-002	6.095-002	2.649-003	3.863-002	2.347-002
2.50	4.710-002	1.026-001	8.017-003	1.979-002	3.071-002	1.177-001	2.909-002	3.426-002	5.827-002	6.423-003	3.697-002	2.549-002
2.60	4.543-002	1.076-001	7.935-003	2.111-002	3.309-002	1.252-001	2.986-002	3.813-002	5.676-002	1.120-002	3.566-002	2.813-002
2.70	4.403-002	1.134-001	8.015-003	2.251-002	3.637-002	1.325-001	3.143-002	4.207-002	5.664-002	1.669-002	3.484-002	3.130-002
2.80	4.303-002	1.199-001	8.271-003	2.394-002	4.048-002	1.393-001	3.381-002	4.589-002	5.804-002	2.255-002	3.461-002	3.489-002
2.90	4.254-002	1.269-001	8.704-003	2.537-002	4.531-002	1.456-001	3.694-002	4.942-002	6.102-002	2.844-002	3.503-002	3.876-002
3.00	4.267-002	1.343-001	9.311-003	2.676-002	5.071-002	1.512-001	4.075-002	5.249-002	6.556-002	3.401-002	3.615-002	4.278-002
3.10	4.347-002	1.422-001	1.008-002	2.809-002	5.650-002	1.559-001	4.512-002	5.499-002	7.157-002	3.898-002	3.799-002	4.682-002
3.20	4.501-002	1.503-001	1.099-002	2.931-002	6.250-002	1.598-001	4.993-002	5.681-002	7.892-002	4.305-002	4.053-002	5.076-002
3.30	4.731-002	1.585-001	1.202-002	3.041-002	6.854-002	1.629-001	5.505-002	5.790-002	8.745-002	4.599-002	4.376-002	5.448-002
3.40	5.040-002	1.668-001	1.316-002	3.137-002	7.445-002	1.650-001	6.033-002	5.821-002	9.696-002	4.760-002	4.762-002	5.788-002
3.50	5.430-002	1.751-001	1.437-002	3.218-002	8.006-002	1.664-001	6.564-002	5.771-002	1.072-001	4.771-002	5.209-002	6.086-002
3.60	5.903-002	1.833-001	1.563-002	3.282-002	8.522-002	1.670-001	7.085-002	5.642-002	1.180-001	4.617-002	5.710-002	6.334-002
3.70	6.460-002	1.912-001	1.693-002	3.328-002	8.979-002	1.670-001	7.581-002	5.434-002	1.292-001	4.284-002	6.261-002	6.523-002
3.80	7.103-002	1.987-001	1.822-002	3.357-002	9.365-002	1.665-001	8.041-002	5.152-002	1.403-001	3.764-002	6.854-002	6.645-002
3.90	7.832-002	2.058-001	1.950-002	3.367-002	9.670-002	1.656-001	8.449-002	4.799-002	1.512-001	3.047-002	7.482-002	6.689-002
4.00	8.645-002	2.122-001	2.072-002	3.358-002	9.883-002	1.644-001	8.794-002	4.383-002	1.614-001	2.126-002	8.137-002	6.648-002
4.50	1.374-001	2.276-001	2.475-002	3.052-002	9.449-002	1.632-001	9.101-002	1.823-002	1.885-001	-5.318-002	1.127-001	4.846-002
5.00	1.784-001	2.005-001	2.203-002	2.672-002	8.028-002	1.919-001	6.869-002	7.691-003	1.365-001	-1.313-001	1.176-001	7.974-003

Table A6b
Pressure Coefficients
$T = 0.05 \quad H = 0.2$

ka	p_1^0		p_2^0		p_3^0		p_1^{90}		p_2^{90}		p_3^{90}	
0.01	5.203-012	-9.750-004	2.668-012	-5.000-004	5.470-012	-1.025-003	-5.225-011	-9.750-004	2.499-012	-5.000-004	-5.493-011	-1.025-003
0.05	3.242-009	-4.873-003	1.662-009	-2.498-003	3.407-009	-5.121-003	3.034-009	-4.875-003	1.560-009	-2.500-003	3.189-009	-5.125-003
0.10	5.136-008	-9.732-003	2.632-008	-4.987-003	5.394-008	-1.022-002	4.854-008	-9.749-003	2.490-008	-4.999-003	5.099-008	-1.025-002
0.15	2.557-007	-1.456-002	1.310-007	-7.458-003	2.683-007	-1.527-002	2.449-007	-1.462-002	1.255-007	-7.498-003	2.570-007	-1.537-002
0.20	7.894-007	-1.935-002	4.041-007	-9.900-003	8.271-007	-2.024-002	7.704-007	-1.949-002	3.943-007	-9.994-003	8.073-007	-2.049-002
0.30	3.730-006	-2.876-002	1.905-006	-1.466-002	3.893-006	-2.989-002	3.841-006	-2.923-002	1.962-006	-1.498-002	4.008-006	-3.073-002
0.40	1.066-005	-3.784-002	5.428-006	-1.921-002	1.106-005	-3.898-002	1.189-005	-3.895-002	6.054-006	-1.996-002	1.233-005	-4.095-002
0.50	2.265-005	-4.651-002	1.149-005	-2.347-002	2.334-005	-4.734-002	2.825-005	-4.865-002	1.433-005	-2.492-002	2.909-005	-5.116-002
0.60	3.896-005	-5.466-002	1.969-005	-2.738-002	3.985-005	-5.482-002	5.670-005	-5.834-002	2.861-005	-2.986-002	5.782-005	-6.135-002
0.70	5.600-005	-6.222-002	2.818-005	-3.088-002	5.687-005	-6.126-002	1.011-004	-6.800-002	5.070-005	-3.478-002	1.019-004	-7.152-002
0.80	6.653-005	-6.909-002	3.341-005	-3.392-002	6.736-005	-6.655-002	1.649-004	-7.765-002	8.215-005	-3.968-002	1.641-004	-8.167-002
0.90	5.940-005	-7.521-002	3.002-005	-3.645-002	6.109-005	-7.056-002	2.511-004	-8.728-002	1.241-004	-4.456-002	2.462-004	-9.181-002
1.00	1.979-005	-8.049-002	1.118-005	-3.844-002	2.556-005	-7.321-002	3.617-004	-9.689-002	1.772-004	-4.942-002	3.487-004	-1.019-001
1.10	-6.983-005	-8.488-002	-3.077-005	-3.983-002	-5.246-005	-7.440-002	4.974-004	-1.065-001	2.414-004	-5.425-002	4.705-004	-1.121-001
1.20	-2.281-004	-8.831-002	-1.034-004	-4.061-002	-1.846-004	-7.407-002	6.575-004	-1.161-001	3.156-004	-5.907-002	6.089-004	-1.222-001
1.30	-4.725-004	-9.071-002	-2.127-004	-4.073-002	-3.781-004	-7.217-002	8.398-004	-1.257-001	3.983-004	-6.385-002	7.597-004	-1.323-001
1.40	-8.166-004	-9.202-002	-3.623-004	-4.018-002	-6.333-004	-6.868-002	1.040-003	-1.353-001	4.871-004	-6.862-002	9.175-004	-1.424-001
1.50	-1.268-003	-9.219-002	-5.513-004	-3.894-002	-9.410-004	-6.358-002	1.254-003	-1.448-001	5.790-004	-7.335-002	1.076-003	-1.525-001
1.60	-1.923-003	-9.117-002	-7.741-004	-3.700-002	-1.281-003	-5.690-002	1.473-003	-1.544-001	6.706-004	-7.806-002	1.228-003	-1.626-001
1.70	-2.469-003	-8.890-002	-1.019-003	-3.436-002	-1.623-003	-4.869-002	1.691-003	-1.640-001	7.586-004	-8.273-002	1.369-003	-1.726-001
1.80	-3.179-003	-8.537-002	-1.270-003	-3.104-002	-1.926-003	-3.902-002	1.901-003	-1.735-001	8.400-004	-8.737-002	1.494-003	-1.826-001
1.90	-3.915-003	-8.057-002	-1.505-003	-2.706-002	-2.144-003	-2.803-002	2.096-003	-1.831-001	9.126-004	-9.195-002	1.600-003	-1.926-001
2.00	-4.631-003	-7.451-002	-1.701-003	-2.247-002	-2.234-003	-1.586-002	2.269-003	-1.926-001	9.756-004	-9.649-002	1.691-003	-2.026-001
2.10	-5.274-003	-6.724-002	-1.837-003	-1.732-002	-2.156-003	-2.723-003	2.420-003	-2.021-001	1.030-003	-1.010-001	1.771-003	-2.124-001
2.20	-5.795-003	-5.881-002	-1.892-003	-1.169-002	-1.888-003	1.116-002	2.548-003	-2.115-001	1.077-003	-1.054-001	1.851-003	-2.222-001
2.30	-6.151-003	-4.933-002	-1.858-003	-5.673-003	-1.428-003	2.553-002	2.658-003	-2.208-001	1.124-003	-1.097-001	1.944-003	-2.319-001
2.40	-6.312-003	-3.891-002	-1.731-003	6.428-004	-7.987-004	4.011-002	2.759-003	-2.301-001	1.175-003	-1.139-001	2.069-003	-2.415-001
2.50	-6.271-003	-2.770-002	-1.522-003	7.152-003	-4.701-005	5.465-002	2.863-003	-2.393-001	1.240-003	-1.181-001	2.244-003	-2.510-001
2.60	-6.038-003	-1.583-002	-1.252-003	1.375-002	7.588-004	6.886-002	2.984-003	-2.483-001	1.326-003	-1.221-001	2.489-003	-2.603-001
2.70	-5.646-003	-3.455-003	-9.496-004	2.035-002	1.536-003	8.251-002	3.142-003	-2.572-001	1.443-003	-1.261-001	2.823-003	-2.696-001
2.80	-5.143-003	9.292-003	-6.498-004	2.684-002	2.196-003	9.538-002	3.353-003	-2.661-001	1.600-003	-1.299-001	3.263-003	-2.788-001
2.90	-4.591-003	2.228-002	-3.896-004	3.316-002	2.656-003	1.073-001	3.638-003	-2.748-001	1.805-003	-1.337-001	3.821-003	-2.880-001
3.00	-4.058-003	3.541-002	-2.039-004	3.924-002	2.844-003	1.181-001	4.014-003	-2.834-001	2.064-003	-1.374-001	4.507-003	-2.971-001
3.10	-3.607-003	4.858-002	-1.216-004	4.502-002	2.711-003	1.276-001	4.499-003	-2.919-001	2.383-003	-1.410-001	5.323-003	-3.062-001
3.20	-3.295-003	6.173-002	-1.630-004	5.046-002	2.233-003	1.357-001	5.110-003	-3.003-001	2.765-003	-1.445-001	6.270-003	-3.153-001
3.30	-3.166-003	7.479-002	-3.375-004	5.551-002	1.416-003	1.424-001	5.860-003	-3.087-001	3.214-003	-1.480-001	7.344-003	-3.244-001
3.40	-3.242-003	8.773-002	-6.420-004	6.016-002	2.923-004	1.476-001	6.763-003	-3.170-001	3.729-003	-1.514-001	8.534-003	-3.336-001
3.50	-3.523-003	1.005-001	-1.060-003	6.436-002	-1.075-003	1.512-001	7.829-003	-3.252-001	4.311-003	-1.547-001	9.829-003	-3.429-001
3.60	-3.983-003	1.131-001	-1.564-003	6.811-002	-2.599-003	1.531-001	9.069-003	-3.334-001	4.957-003	-1.581-001	1.121-002	-3.522-001
3.70	-4.566-003	1.256-001	-2.111-003	7.137-002	-4.175-003	1.533-001	1.049-002	-3.417-001	5.662-003	-1.613-001	1.266-002	-3.616-001
3.80	-5.184-003	1.378-001	-2.649-003	7.411-002	-5.684-003	1.517-001	1.210-002	-3.500-001	6.422-003	-1.646-001	1.414-002	-3.712-001
3.90	-5.718-003	1.497-001	-3.116-003	7.631-002	-7.003-003	1.481-001	1.389-002	-3.583-001	7.228-003	-1.679-001	1.563-002	-3.809-001
4.00	-6.015-003	1.614-001	-3.443-003	7.792-002	-8.016-003	1.427-001	1.587-002	-3.668-001	8.068-003	-1.711-001	1.709-002	-3.907-001
4.50	3.129-003	2.100-001	-7.228-004	7.468-002	-6.574-003	8.148-002	2.761-002	-4.123-001	1.211-002	-1.877-001	2.221-002	-4.415-001
5.00	4.024-002	2.118-001	8.219-003	4.415-002	-7.629-003	-3.722-002	3.528-002	-4.651-001	1.320-002	-2.034-001	2.052-002	-4.892-001

Table A7a
Impedance Coefficients
$T = 0.1 \quad H = 0.2$

ka	Z_1		Z_2		Z_3		Z_1'		Z_2'		Z_3'	
0.01	2.998-006	7.112-00~	3.333-006	5.637-004	3.682-006	7.036-004	7.007-006	8.450-004	6.645-006	6.886-004	6.322-006	8.565-004
0.05	7.490-005	3.554-003	8.325-005	2.816-003	9.196-005	3.515-003	1.750-004	4.219-003	1.660-004	3.438-003	1.579-004	4.278-003
0.10	2.991-004	7.097-003	3.321-004	5.615-003	3.666-004	7.009-003	6.979-004	8.401-003	6.622-004	6.843-003	6.303-004	8.528-003
0.15	6.709-004	1.062-002	7.440-004	8.382-003	8.202-004	1.046-002	1.562-003	1.251-002	1.484-003	1.018-002	1.413-003	1.272-002
0.20	1.188-003	1.410-002	1.314-003	1.110-002	1.447-003	1.386-002	2.758-003	1.651-002	2.621-003	1.343-002	2.499-003	1.683-002
0.30	2.640-003	2.092-002	2.905-003	1.633-002	3.182-003	2.040-002	6.081-003	2.406-002	5.796-003	1.950-002	5.539-003	2.469-002
0.40	4.615-003	2.746-002	5.039-003	2.121-002	5.479-003	2.649-002	1.051-002	3.079-002	1.006-002	2.485-002	9.644-003	3.191-002
0.50	7.057-003	3.367-002	7.629-003	2.562-002	8.220-003	3.205-002	1.584-002	3.651-002	1.523-002	2.927-002	1.467-002	3.833-002
0.60	9.903-003	3.946-002	1.057-002	2.951-002	1.126-002	3.698-002	2.182-002	4.108-002	2.112-002	3.262-002	2.046-002	4.379-002
0.70	1.308-002	4.480-002	1.375-002	3.282-002	1.445-002	4.127-002	2.819-002	4.440-002	2.749-002	3.480-002	2.682-002	4.820-002
0.80	1.650-002	4.965-002	1.705-002	3.553-002	1.764-002	4.490-002	3.468-002	4.645-002	3.410-002	3.574-002	3.354-002	5.150-002
0.90	2.009-002	5.398-002	2.035-002	3.764-002	2.067-002	4.792-002	4.101-002	4.724-002	4.072-002	3.543-002	4.043-002	5.364-002
1.00	2.376-002	5.777-002	2.353-002	3.917-002	2.341-002	5.039-002	4.691-002	4.688-002	4.709-002	3.392-002	4.727-002	5.463-002
1.10	2.743-002	6.104-002	2.648-002	4.016-002	2.574-002	5.242-002	5.216-002	4.550-002	5.299-002	3.127-002	5.386-002	5.452-002
1.20	3.100-002	6.378-002	2.909-002	4.069-002	2.756-002	5.413-002	5.655-002	4.328-002	5.820-002	2.761-002	6.001-002	5.336-002
1.30	3.439-002	6.604-002	3.129-002	4.083-002	2.881-002	5.567-002	5.992-002	4.046-002	6.253-002	2.310-002	6.552-002	5.128-002
1.40	3.752-002	6.784-002	3.300-002	4.069-002	2.947-002	5.719-002	6.216-002	3.730-002	6.582-002	1.795-002	7.024-002	4.841-002
1.50	4.030-002	6.924-002	3.417-002	4.039-002	2.954-002	5.888-002	6.322-002	3.409-002	6.796-002	1.239-002	7.401-002	4.493-002
1.60	4.266-002	7.031-002	3.477-002	4.005-002	2.910-002	6.089-002	6.312-002	3.114-002	6.886-002	6.692-003	7.673-002	4.104-002
1.70	4.453-002	7.114-002	3.482-002	3.981-002	2.822-002	6.337-002	6.196-002	2.874-002	6.853-002	1.142-003	7.832-002	3.698-002
1.80	4.587-002	7.184-002	3.436-002	3.981-002	2.707-002	6.645-002	5.992-002	2.717-002	6.702-002	-3.963-003	7.876-002	3.301-002
1.90	4.665-002	7.252-002	3.344-002	4.018-002	2.581-002	7.020-002	5.724-002	2.666-002	6.446-002	-8.342-003	7.810-002	2.939-002
2.00	4.687-002	7.332-002	3.219-002	4.101-002	2.465-002	7.468-002	5.422-002	2.736-002	6.106-002	-1.174-002	7.643-002	2.637-002
2.10	4.656-002	7.436-002	3.072-002	4.239-002	2.378-002	7.984-002	5.122-002	2.936-002	5.710-002	-1.397-002	7.392-002	2.421-002
2.20	4.577-002	7.577-002	2.920-002	4.436-002	2.342-002	8.559-002	4.860-002	3.262-002	5.290-002	-1.491-002	7.080-002	2.307-002
2.30	4.460-002	7.766-002	2.777-002	4.692-002	2.371-002	9.181-002	4.671-002	3.701-002	4.880-002	-1.453-002	6.734-002	2.308-002
2.40	4.316-002	8.010-002	2.659-002	5.002-002	2.478-002	9.829-002	4.584-002	4.231-002	4.516-002	-1.291-002	6.383-002	2.430-002
2.50	4.159-002	8.315-002	2.579-002	5.359-002	2.667-002	1.048-001	4.620-002	4.822-002	4.227-002	-1.020-002	6.056-002	2.669-002
2.60	4.000-002	8.683-002	2.546-002	5.752-002	2.939-002	1.112-001	4.792-002	5.441-002	4.079-002	-6.622-003	5.779-002	3.018-002
2.70	3.854-002	9.113-002	2.567-002	6.167-002	3.286-002	1.173-001	5.101-002	6.053-002	3.969-002	-2.463-003	5.575-002	3.459-002
2.80	3.731-002	9.602-002	2.645-002	6.593-002	3.697-002	1.228-001	5.542-002	6.627-002	4.027-002	1.984-003	5.461-002	3.975-002
2.90	3.642-002	1.014-001	2.779-002	7.016-002	4.157-002	1.277-001	6.102-002	7.135-002	4.216-002	6.423-003	5.448-002	4.546-002
3.00	3.594-002	1.073-001	2.968-002	7.425-002	4.651-002	1.319-001	6.761-002	7.553-002	4.532-002	1.057-002	5.544-002	5.149-002
3.10	3.595-002	1.136-001	3.205-002	7.811-002	5.163-002	1.354-001	7.498-002	7.865-002	4.966-002	1.419-002	5.751-002	5.766-002
3.20	3.650-002	1.202-001	3.486-002	8.166-002	5.675-002	1.381-001	8.291-002	8.061-002	5.505-002	1.707-002	6.068-002	6.378-002
3.30	3.763-002	1.271-001	3.803-002	8.483-002	6.173-002	1.401-001	9.117-002	8.132-002	6.136-002	1.901-002	6.493-002	6.969-002
3.40	3.937-002	1.342-001	4.150-002	8.760-002	6.644-002	1.414-001	9.953-002	8.078-002	6.843-002	1.988-002	7.022-002	7.524-002
3.50	4.176-002	1.415-001	4.521-002	8.991-002	7.077-002	1.422-001	1.078-001	7.898-002	7.609-002	1.954-002	7.650-002	8.029-002
3.60	4.485-002	1.488-001	4.908-002	9.174-002	7.461-002	1.425-001	1.158-001	7.595-002	8.418-002	1.789-002	8.374-002	8.472-002
3.70	4.868-002	1.561-001	5.307-002	9.307-002	7.788-002	1.424-001	1.232-001	7.174-002	9.250-002	1.481-002	9.188-002	8.839-002
3.80	5.331-002	1.634-001	5.711-002	9.386-002	8.050-002	1.420-001	1.300-001	6.642-002	1.009-001	1.020-002	1.009-001	9.117-002
3.90	5.879-002	1.705-001	6.113-002	9.411-002	8.242-002	1.415-001	1.359-001	6.006-002	1.090-001	3.969-003	1.107-001	9.288-002
4.00	6.519-002	1.773-001	6.505-002	9.378-002	8.358-002	1.409-001	1.408-001	5.277-002	1.168-001	-3.967-003	1.212-001	9.334-002
4.50	1.119-001	1.995-001	7.931-002	8.318-002	7.824-002	1.446-001	1.416-001	9.569-003	1.348-001	-6.921-002	1.781-001	6.861-002
5.00	1.617-001	1.760-001	7.120-002	6.740-002	7.205-002	1.759-001	1.007-001	-4.307-003	7.787-002	-1.372-001	1.957-001	-7.249-003

Table A7b
Pressure Coefficients
$T = 0.1 \quad H = 0.2$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	9.755-012 -9.500-004	1.027-011 -1.000-003	1.078-011 -1.050-003	-4.616-011 -9.500-004	9.999-012 -1.000-003	-5.102-011 -1.050-003
0.05	6.082-009 -4.748-003	6.401-009 -4.997-003	6.720-009 -5.246-003	5.924-009 -4.750-003	6.244-009 -5.000-003	6.545-009 -5.250-003
0.10	9.653-008 -9.483-003	1.016-007 -9.974-003	1.066-007 -1.046-002	9.467-008 -9.499-003	9.964-008 -9.998-003	1.045-007 -1.050-002
0.15	4.822-007 -1.419-002	5.070-007 -1.491-002	5.317-007 -1.563-002	4.776-007 -1.425-002	5.022-007 -1.499-002	5.266-007 -1.575-002
0.20	1.496-006 -1.887-002	1.571-006 -1.980-002	1.646-006 -2.072-002	1.502-006 -1.899-002	1.577-006 -1.998-002	1.653-006 -2.099-002
0.30	7.171-006 -2.805-002	7.511-006 -2.931-002	7.852-006 -3.056-002	7.489-006 -2.846-002	7.844-006 -2.994-002	8.199-006 -3.146-002
0.40	2.095-005 -3.695-002	2.186-005 -3.839-002	2.278-005 -3.979-002	2.318-005 -3.791-002	2.418-005 -3.987-002	2.519-005 -4.192-002
0.50	4.606-005 -4.547-002	4.782-005 -4.688-002	4.961-005 -4.823-002	5.510-005 -4.734-002	5.719-005 -4.975-002	5.930-005 -5.234-002
0.60	8.336-005 -5.352-002	8.607-005 -5.467-002	8.885-005 -5.571-002	1.106-004 -5.673-002	1.141-004 -5.957-002	1.176-004 -6.274-002
0.70	1.298-004 -6.105-002	1.332-004 -6.165-002	1.367-004 -6.207-002	1.973-004 -6.609-002	2.020-004 -6.935-002	2.068-004 -7.311-002
0.80	1.770-004 -6.797-002	1.805-004 -6.771-002	1.844-004 -6.719-002	3.222-004 -7.542-002	3.270-004 -7.906-002	3.322-004 -8.347-002
0.90	2.107-004 -7.423-002	2.138-004 -7.276-002	2.178-004 -7.095-002	4.914-004 -8.473-002	4.938-004 -8.872-002	4.970-004 -9.380-002
1.00	2.107-004 -7.975-002	2.142-004 -7.672-002	2.193-004 -7.325-002	7.091-004 -9.402-002	7.047-004 -9.833-002	7.018-004 -1.041-001
1.10	1.519-004 -8.449-002	1.592-004 -7.952-002	1.693-004 -7.400-002	9.772-004 -1.033-001	9.592-004 -1.079-001	9.438-004 -1.144-001
1.20	6.388-006 -8.838-002	2.593-005 -8.108-002	5.013-005 -7.313-002	1.295-003 -1.126-001	1.254-003 -1.174-001	1.217-003 -1.248-001
1.30	-2.540-004 -9.135-002	-2.056-004 -8.135-002	-1.502-004 -7.060-002	1.659-003 -1.219-001	1.582-003 -1.268-001	1.513-003 -1.351-001
1.40	-6.537-004 -9.333-002	-5.486-004 -8.027-002	-4.338-004 -6.637-002	2.061-003 -1.311-001	1.934-003 -1.362-001	1.819-003 -1.454-001
1.50	-1.209-003 -9.427-002	-1.006-003 -7.780-002	-7.894-004 -6.045-002	2.492-003 -1.405-001	2.298-003 -1.456-001	2.123-003 -1.558-001
1.60	-1.926-003 -9.408-002	-1.565-003 -7.392-002	-1.190-003 -5.284-002	2.938-003 -1.498-001	2.659-003 -1.549-001	2.411-003 -1.661-001
1.70	-2.792-003 -9.271-002	-2.199-003 -6.861-002	-1.592-003 -4.362-002	3.384-003 -1.591-001	3.005-003 -1.641-001	2.670-003 -1.764-001
1.80	-3.778-003 -9.011-002	-2.863-003 -6.190-002	-1.938-003 -3.287-002	3.813-003 -1.685-001	3.322-003 -1.732-001	2.893-003 -1.867-001
1.90	-4.836-003 -8.625-002	-3.502-003 -5.384-002	-2.166-003 -2.076-002	4.210-003 -1.778-001	3.600-003 -1.823-001	3.077-003 -1.969-001
2.00	-5.904-003 -8.110-002	-4.050-003 -4.451-002	-2.213-003 -7.465-003	4.562-003 -1.872-001	3.837-003 -1.911-001	3.228-003 -2.070-001
2.10	-6.909-003 -7.471-002	-4.446-003 -3.406-002	-2.030-003 6.758-003	4.861-003 -1.964-001	4.035-003 -1.998-001	3.359-003 -2.170-001
2.20	-7.777-003 -6.711-002	-4.640-003 -2.263-002	-1.593-003 2.163-002	5.107-003 -2.057-001	4.206-003 -2.083-001	3.496-003 -2.268-001
2.30	-8.443-003 -5.842-002	-4.604-003 -1.044-002	-9.097-004 3.683-002	5.305-003 -2.148-001	4.369-003 -2.166-001	3.669-003 -2.365-001
2.40	-8.861-003 -4.874-002	-4.335-003 2.300-003	-2.576-005 5.205-002	5.471-003 -2.237-001	4.551-003 -2.246-001	3.917-003 -2.460-001
2.50	-9.011-003 -3.822-002	-3.867-003 1.536-002	9.783-004 6.697-002	5.628-003 -2.325-001	4.785-003 -2.323-001	4.280-003 -2.553-001
2.60	-8.902-003 -2.702-002	-3.259-003 2.851-002	1.995-003 8.130-002	5.804-003 -2.412-001	5.105-003 -2.397-001	4.797-003 -2.645-001
2.70	-8.572-003 -1.527-002	-2.594-003 4.155-002	2.900-003 9.478-002	6.033-003 -2.496-001	5.545-003 -2.469-001	5.502-003 -2.735-001
2.80	-8.083-003 -3.136-003	-1.968-003 5.429-002	3.571-003 1.072-001	6.356-003 -2.579-001	6.139-003 -2.538-001	6.423-003 -2.825-001
2.90	-7.513-003 9.277-003	-1.478-003 6.660-002	3.898-003 1.184-001	6.796-003 -2.660-001	6.914-003 -2.604-001	7.579-003 -2.914-001
3.00	-6.948-003 2.187-002	-1.212-003 7.835-002	3.797-003 1.281-001	7.388-003 -2.739-001	7.893-003 -2.669-001	8.978-003 -3.003-001
3.10	-6.471-003 3.456-002	-1.242-003 8.945-002	3.217-003 1.365-001	8.175-003 -2.816-001	9.093-003 -2.731-001	1.062-002 -3.092-001
3.20	-6.156-003 4.731-002	-1.612-003 9.983-002	2.143-003 1.432-001	9.181-003 -2.892-001	1.053-002 -2.791-001	1.250-002 -3.181-001
3.30	-6.062-003 6.008-002	-2.341-003 1.094-001	6.026-004 1.484-001	1.044-002 -2.966-001	1.220-002 -2.850-001	1.460-002 -3.272-001
3.40	-6.223-003 7.288-002	-3.417-003 1.183-001	-1.344-003 1.519-001	1.197-002 -3.040-001	1.412-002 -2.907-001	1.691-002 -3.365-001
3.50	-6.650-003 8.569-002	-4.794-003 1.263-001	-3.602-003 1.536-001	1.380-002 -3.113-001	1.628-002 -2.964-001	1.938-002 -3.459-001
3.60	-7.321-003 9.853-002	-6.399-003 1.334-001	-6.050-003 1.536-001	1.596-002 -3.185-001	1.867-002 -3.020-001	2.199-002 -3.555-001
3.70	-8.181-003 1.114-001	-8.130-003 1.396-001	-8.548-003 1.518-001	1.848-002 -3.258-001	2.130-002 -3.076-001	2.470-002 -3.653-001
3.80	-9.138-003 1.244-001	-9.857-003 1.450-001	-1.094-002 1.481-001	2.137-002 -3.331-001	2.415-002 -3.132-001	2.746-002 -3.755-001
3.90	-1.005-002 1.374-001	-1.142-002 1.493-001	-1.307-002 1.425-001	2.467-002 -3.405-001	2.719-002 -3.189-001	3.020-002 -3.859-001
4.00	-1.075-002 1.506-001	-1.266-002 1.526-001	-1.480-002 1.347-001	2.838-002 -3.481-001	3.040-002 -3.246-001	3.286-002 -3.966-001
4.50	-1.212-003 2.135-001	-7.539-003 1.485-001	-1.517-002 6.078-002	5.239-002 -3.930-001	4.657-002 -3.564-001	4.151-002 -4.539-001
5.00	4.991-002 2.331-001	1.628-002 8.704-002	-2.047-002 -7.192-002	7.049-002 -4.581-001	5.120-002 -3.903-001	3.613-002 -5.050-001

Table A8a
Impedance Coefficients
$T = 0.2 \quad H = 0.2$

ka	Z_1		Z_2		Z_3		Z_1'		Z_2'		Z_3'	
0.01	2.029-006	5.121-004	9.995-006	1.530-003	3.026-006	5.594-004	1.100-005	1.204-003	4.955-006	4.619-004	9.006-006	1.151-003
0.05	5.069-005	2.559-003	2.496-004	7.641-003	7.555-005	2.794-003	2.747-004	6.009-003	1.238-004	2.306-003	2.250-004	5.748-003
0.10	2.024-004	5.111-003	9.957-004	1.523-002	3.010-004	5.570-003	1.095-003	1.196-002	4.937-004	4.586-003	8.979-004	1.146-002
0.15	4.542-004	7.648-003	2.230-003	2.272-002	6.730-004	8.312-003	2.450-003	1.779-002	1.106-003	6.816-003	2.013-003	1.708-002
0.20	8.043-004	1.016-002	3.938-003	3.007-002	1.186-003	1.100-002	4.322-003	2.344-002	1.953-003	8.971-003	3.559-003	2.259-002
0.30	1.790-003	1.510-002	8.696-003	4.413-002	2.600-003	1.616-002	9.509-003	3.399-002	4.314-003	1.297-002	7.890-003	3.311-002
0.40	3.133-003	1.986-002	1.506-002	5.710-002	4.459-003	2.095-002	1.639-002	4.323-002	7.475-003	1.640-002	1.374-002	4.273-002
0.50	4.803-003	2.441-002	2.276-002	6.869-002	6.653-003	2.527-002	2.461-002	5.084-002	1.130-002	1.914-002	2.091-002	5.121-002
0.60	6.760-003	2.871-002	3.149-002	7.870-002	9.059-003	2.909-002	3.378-002	5.661-002	1.565-002	2.106-002	2.918-002	5.837-002
0.70	8.962-003	3.272-002	4.090-002	8.699-002	1.154-002	3.236-002	4.345-002	6.041-002	2.033-002	2.209-002	3.829-002	6.407-002
0.80	1.137-002	3.642-002	5.064-002	9.351-002	1.398-002	3.512-002	5.319-002	6.222-002	2.518-002	2.219-002	4.797-002	6.820-002
0.90	1.393-002	3.980-002	6.036-002	9.825-002	1.623-002	3.741-002	6.256-002	6.212-002	3.001-002	2.135-002	5.796-002	7.070-002
1.00	1.660-002	4.282-002	6.971-002	1.013-001	1.821-002	3.929-002	7.117-002	6.026-002	3.464-002	1.959-002	6.798-002	7.158-002
1.10	1.933-002	4.550-002	7.839-002	1.028-001	1.980-002	4.086-002	7.866-002	5.689-002	3.891-002	1.695-002	7.777-002	7.084-002
1.20	2.207-002	4.781-002	8.609-002	1.028-001	2.096-002	4.225-002	8.472-002	5.231-002	4.265-002	1.353-002	8.705-002	6.856-002
1.30	2.478-002	4.975-002	9.256-002	1.017-001	2.165-002	4.357-002	8.911-002	4.690-002	4.569-002	9.430-003	9.555-002	6.483-002
1.40	2.738-002	5.134-002	9.757-002	9.980-002	2.185-002	4.498-002	9.168-002	4.108-002	4.792-002	4.796-003	1.030-001	5.980-002
1.50	2.983-002	5.259-002	1.010-001	9.733-002	2.161-002	4.661-002	9.238-002	3.534-002	4.921-002	-1.958-004	1.092-001	5.368-002
1.60	3.205-002	5.351-002	1.027-001	9.472-002	2.100-002	4.860-002	9.126-002	3.016-002	4.949-002	-5.337-003	1.139-001	4.671-002
1.70	3.398-002	5.415-002	1.026-001	9.238-002	2.013-002	5.107-002	8.851-002	2.604-002	4.873-002	-1.039-002	1.169-001	3.921-002
1.80	3.556-002	5.456-002	1.010-001	9.075-002	1.914-002	5.411-002	8.446-002	2.341-002	4.694-002	-1.511-002	1.181-001	3.156-002
1.90	3.674-002	5.483-002	9.796-002	9.022-002	1.823-002	5.775-002	7.955-002	2.263-002	4.423-002	-1.924-002	1.175-001	2.417-002
2.00	3.746-002	5.503-002	9.383-002	9.117-002	1.756-002	6.198-002	7.436-002	2.392-002	4.076-002	-2.255-002	1.152-001	1.749-002
2.10	3.773-002	5.529-002	8.905-002	9.383-002	1.734-002	6.673-002	6.950-002	2.734-002	3.677-002	-2.486-002	1.113-001	1.194-002
2.20	3.755-002	5.570-002	8.411-002	9.834-002	1.770-002	7.185-002	6.561-002	3.272-002	3.255-002	-2.606-002	1.062-001	7.859-003
2.30	3.697-002	5.639-002	7.951-002	1.047-001	1.875-002	7.717-002	6.322-002	3.972-002	2.840-002	-2.612-002	1.003-001	5.523-003
2.40	3.606-002	5.743-002	7.572-002	1.127-001	2.053-002	8.248-002	6.276-002	4.787-002	2.462-002	-2.513-002	9.402-002	5.058-003
2.50	3.491-002	5.889-002	7.312-002	1.220-001	2.302-002	8.760-002	6.447-002	5.658-002	2.148-002	-2.323-002	8.788-002	6.465-003
2.60	3.362-002	6.083-002	7.200-002	1.323-001	2.611-002	9.234-002	6.839-002	6.525-002	1.917-002	-2.064-002	8.229-002	9.620-003
2.70	3.229-002	6.324-002	7.249-002	1.433-001	2.969-002	9.657-002	7.440-002	7.332-002	1.782-002	-1.761-002	7.760-002	1.431-002
2.80	3.101-002	6.613-002	7.462-002	1.544-001	3.361-002	1.002-001	8.226-002	8.032-002	1.748-002	-1.439-002	7.409-002	2.025-002
2.90	2.987-002	6.947-002	7.833-002	1.654-001	3.769-002	1.032-001	9.161-002	8.590-002	1.814-002	-1.122-002	7.193-002	2.716-002
3.00	2.893-002	7.322-002	8.348-002	1.759-001	4.180-002	1.056-001	1.021-001	8.983-002	1.973-002	-8.316-003	7.123-002	3.473-002
3.10	2.825-002	7.736-002	8.992-002	1.857-001	4.580-002	1.074-001	1.133-001	9.197-002	2.217-002	-5.852-003	7.203-002	4.271-002
3.20	2.788-002	8.184-002	9.747-002	1.948-001	4.957-002	1.086-001	1.249-001	9.226-002	2.533-002	-3.972-003	7.432-002	5.086-002
3.30	2.784-002	8.664-002	1.059-001	2.028-001	5.303-002	1.095-001	1.366-001	9.073-002	2.911-002	-2.789-003	7.810-002	5.898-002
3.40	2.819-002	9.171-002	1.152-001	2.099-001	5.610-002	1.099-001	1.480-001	8.744-002	3.338-002	-2.399-003	8.333-002	6.689-002
3.50	2.895-002	9.705-002	1.251-001	2.158-001	5.874-002	1.101-001	1.589-001	8.245-002	3.801-002	-2.884-003	9.000-002	7.444-002
3.60	3.018-002	1.026-001	1.354-001	2.206-001	6.092-002	1.101-001	1.691-001	7.587-002	4.290-002	-4.314-003	9.811-002	8.147-002
3.70	3.193-002	1.084-001	1.462-001	2.241-001	6.260-002	1.101-001	1.783-001	6.781-002	4.791-002	-6.763-003	1.077-001	8.783-002
3.80	3.427-002	1.144-001	1.573-001	2.264-001	6.378-002	1.100-001	1.863-001	5.837-002	5.289-002	-1.030-002	1.187-001	9.331-002
3.90	3.729-002	1.205-001	1.684-001	2.273-001	6.446-002	1.101-001	1.928-001	4.769-002	5.769-002	-1.501-002	1.312-001	9.769-002
4.00	4.108-002	1.266-001	1.796-001	2.267-001	6.464-002	1.104-001	1.977-001	3.594-002	6.210-002	-2.097-002	1.453-001	1.007-001
4.50	7.538-002	1.528-001	2.260-001	1.970-001	6.040-002	1.200-001	1.871-001	-2.774-002	6.721-002	-6.954-002	2.340-001	7.828-002
5.00	1.265-001	1.412-001	2.094-001	1.414-001	6.629-002	1.483-001	1.216-001	-3.649-002	1.071-002	-1.139-001	2.827-001	-4.149-002

Table A8b
Pressure Coefficients
$T = 0.2 \quad H = 0.2$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	1.795-011 -9.000-004	3.988-011 -2.000-003	2.194-011 -1.100-003	-3.474-011 -9.000-004	3.998-011 -2.000-003	-4.246-011 -1.100-003
0.05	1.119-008 -4.498-003	2.487-008 -9.993-003	1.367-008 -5.495-003	1.123-008 -4.500-003	2.496-008 -9.999-003	1.372-008 -5.500-003
0.10	1.778-007 -8.986-003	3.949-007 -1.995-002	2.170-007 -1.096-002	1.793-007 -8.998-003	3.983-007 -1.999-002	2.189-007 -1.100-002
0.15	8.900-007 -1.345-002	1.974-006 -2.982-002	1.084-006 -1.636-002	9.045-007 -1.349-002	2.007-006 -2.998-002	1.102-006 -1.649-002
0.20	2.767-006 -1.789-002	6.131-006 -3.958-002	3.363-006 -2.167-002	2.844-006 -1.798-002	6.300-006 -3.994-002	3.456-006 -2.198-002
0.30	1.337-005 -2.663-002	2.950-005 -5.858-002	1.612-005 -3.190-002	1.418-005 -2.694-002	3.130-005 -5.981-002	1.711-005 -3.293-002
0.40	3.951-005 -3.512-002	8.674-005 -7.666-002	4.718-005 -4.141-002	4.390-005 -3.585-002	9.636-005 -7.957-002	5.241-005 -4.385-002
0.50	8.829-005 -4.332-002	1.925-004 -9.357-002	1.041-004 -5.000-002	1.044-004 -4.473-002	2.275-004 -9.919-002	1.230-004 -5.472-002
0.60	1.637-004 -5.114-002	3.540-004 -1.090-001	1.900-004 -5.748-002	2.097-004 -5.355-002	4.532-004 -1.187-001	2.430-004 -6.555-002
0.70	2.637-004 -5.854-002	5.652-004 -1.229-001	3.009-004 -6.369-002	3.744-004 -6.232-002	8.010-004 -1.380-001	4.253-004 -7.635-002
0.80	3.784-004 -6.548-002	8.033-004 -1.349-001	4.239-004 -6.849-002	6.126-004 -7.105-002	1.295-003 -1.571-001	6.798-004 -8.711-002
0.90	4.885-004 -7.191-002	1.027-003 -1.449-001	5.375-004 -7.174-002	9.365-004 -7.975-002	1.953-003 -1.761-001	1.012-003 -9.786-002
1.00	5.645-004 -7.779-002	1.178-003 -1.528-001	6.135-004 -7.335-002	1.356-003 -8.842-002	2.784-003 -1.950-001	1.421-003 -1.086-001
1.10	5.681-004 -8.307-002	1.186-003 -1.584-001	6.209-004 -7.323-002	1.876-003 -9.709-002	3.786-003 -2.137-001	1.899-003 -1.194-001
1.20	4.539-004 -8.770-002	9.750-004 -1.615-001	5.311-004 -7.131-002	2.497-003 -1.058-001	4.947-003 -2.324-001	2.434-003 -1.302-001
1.30	1.736-004 -9.161-002	4.768-004 -1.621-001	3.251-004 -6.754-002	3.216-003 -1.145-001	6.239-003 -2.509-001	3.003-003 -1.410-001
1.40	-3.193-004 -9.474-002	-3.601-004 -1.600-001	-2.063-007 -6.188-002	4.020-003 -1.233-001	7.625-003 -2.695-001	3.582-003 -1.519-001
1.50	-1.063-003 -9.699-002	-1.555-003 -1.551-001	-4.252-004 -5.433-002	4.889-003 -1.321-001	9.054-003 -2.879-001	4.142-003 -1.628-001
1.60	-2.079-003 -9.828-002	-3.085-003 -1.472-001	-9.042-004 -4.494-002	5.799-003 -1.410-001	1.047-002 -3.063-001	4.653-003 -1.737-001
1.70	-3.367-003 -9.849-002	-4.873-003 -1.365-001	-1.365-003 -3.378-002	6.716-003 -1.500-001	1.181-002 -3.245-001	5.092-003 -1.846-001
1.80	-4.894-003 -9.754-002	-6.792-003 -1.228-001	-1.716-003 -2.099-002	7.603-003 -1.591-001	1.302-002 -3.425-001	5.445-003 -1.954-001
1.90	-6.598-003 -9.533-002	-8.670-003 -1.062-001	-1.855-003 -6.795-003	8.422-003 -1.682-001	1.406-002 -3.602-001	5.711-003 -2.061-001
2.00	-8.383-003 -9.181-002	-1.031-002 -8.696-002	-1.692-003 8.534-003	9.139-003 -1.774-001	1.491-002 -3.775-001	5.912-003 -2.166-001
2.10	-1.014-002 -8.698-002	-1.153-002 -6.537-002	-1.166-003 2.465-002	9.729-003 -1.866-001	1.559-002 -3.943-001	6.088-003 -2.269-001
2.20	-1.173-002 -8.086-002	-1.217-002 -4.185-002	-2.640-004 4.114-002	1.018-002 -1.956-001	1.615-002 -4.105-001	6.303-003 -2.369-001
2.30	-1.305-002 -7.354-002	-1.217-002 -1.687-002	9.631-004 5.761-002	1.050-002 -2.046-001	1.668-002 -4.259-001	6.633-003 -2.466-001
2.40	-1.402-002 -6.515-002	-1.154-002 9.010-003	2.404-003 7.363-002	1.071-002 -2.133-001	1.728-002 -4.405-001	7.164-003 -2.560-001
2.50	-1.458-002 -5.586-002	-1.041-002 3.527-002	3.898-003 8.883-002	1.085-002 -2.218-001	1.809-002 -4.543-001	7.976-003 -2.651-001
2.60	-1.474-002 -4.583-002	-8.972-003 6.140-002	5.252-003 1.029-001	1.098-002 -2.301-001	1.925-002 -4.671-001	9.142-003 -2.740-001
2.70	-1.455-002 -3.524-002	-7.485-003 8.698-002	6.274-003 1.156-001	1.116-002 -2.380-001	2.088-002 -4.792-001	1.071-002 -2.828-001
2.80	-1.408-002 -2.424-002	-6.224-003 1.117-001	6.791-003 1.267-001	1.145-002 -2.456-001	2.310-002 -4.904-001	1.273-002 -2.915-001
2.90	-1.343-002 -1.295-002	-5.447-003 1.352-001	6.671-003 1.361-001	1.191-002 -2.528-001	2.598-002 -5.009-001	1.519-002 -3.003-001
3.00	-1.272-002 -1.441-003	-5.373-003 1.574-001	5.836-003 1.438-001	1.261-002 -2.598-001	2.961-002 -5.108-001	1.809-002 -3.091-001
3.10	-1.207-002 1.022-002	-6.159-003 1.782-001	4.262-003 1.496-001	1.361-002 -2.664-001	3.402-002 -5.202-001	2.142-002 -3.181-001
3.20	-1.156-002 2.202-002	-7.892-003 1.975-001	1.981-003 1.536-001	1.495-002 -2.728-001	3.925-002 -5.291-001	2.514-002 -3.274-001
3.30	-1.128-002 3.397-002	-1.059-002 2.153-001	-9.240-004 1.558-001	1.669-002 -2.790-001	4.532-002 -5.376-001	2.919-002 -3.370-001
3.40	-1.128-002 4.607-002	-1.418-002 2.315-001	-4.333-003 1.561-001	1.888-002 -2.849-001	5.224-002 -5.459-001	3.354-002 -3.469-001
3.50	-1.160-002 5.838-002	-1.855-002 2.462-001	-8.091-003 1.545-001	2.158-002 -2.907-001	6.004-002 -5.540-001	3.812-002 -3.573-001
3.60	-1.222-002 7.095-002	-2.351-002 2.593-001	-1.202-002 1.509-001	2.486-002 -2.963-001	6.871-002 -5.620-001	4.286-002 -3.682-001
3.70	-1.311-002 8.384-002	-2.879-002 2.709-001	-1.594-002 1.454-001	2.879-002 -3.019-001	7.825-002 -5.700-001	4.768-002 -3.795-001
3.80	-1.419-002 9.712-002	-3.409-002 2.808-001	-1.964-002 1.378-001	3.344-002 -3.075-001	8.866-002 -5.782-001	5.249-002 -3.914-001
3.90	-1.533-002 1.109-001	-3.903-002 2.891-001	-2.296-002 1.282-001	3.889-002 -3.132-001	9.990-002 -5.866-001	5.717-002 -4.039-001
4.00	-1.634-002 1.251-001	-4.319-002 2.955-001	-2.572-002 1.164-001	4.523-002 -3.191-001	1.119-001 -5.956-001	6.159-002 -4.170-001
4.50	-7.881-003 2.028-001	-3.622-002 2.915-001	-2.981-002 2.121-002	9.150-002 -3.608-001	1.769-001 -6.562-001	7.328-002 -4.891-001
5.00	5.490-002 2.484-001	2.396-002 1.705-001	-4.272-002 -1.238-001	1.353-001 -4.512-001	2.008-001 -7.420-001	5.842-002 -5.447-001

Table A9a
Impedance Coefficients
$T = 0.3 \quad H = 0.2$

ka	Z_1		Z_2		Z_3		Z_1'		Z_2'		Z_3'	
0.01	1.449-006	3.888-004	1.799-005	2.571-003	2.644-006	4.731-004	1.380-005	1.399-003	3.914-006	3.364-004	1.021-005	1.252-003
0.05	3.619-005	1.943-003	4.494-004	1.284-002	6.601-005	2.363-003	3.445-004	6.984-003	9.776-005	1.679-003	2.551-004	6.251-003
0.10	1.445-004	3.882-003	1.792-003	2.559-002	2.629-004	4.709-003	1.373-003	1.389-002	3.899-004	3.337-003	1.018-003	1.246-002
0.15	3.244-004	5.810-003	4.013-003	3.816-002	5.873-004	7.024-003	3.070-003	2.064-002	8.729-004	4.954-003	2.282-003	1.857-002
0.20	5.746-004	7.724-003	7.084-003	5.046-002	1.034-003	9.291-003	5.412-003	2.716-002	1.541-003	6.511-003	4.035-003	2.455-002
0.30	1.280-003	1.149-002	1.562-002	7.392-002	2.260-003	1.363-002	1.188-002	3.922-002	3.401-003	9.368-003	8.943-003	3.595-002
0.40	2.243-003	1.514-002	2.702-002	9.537-002	3.859-003	1.762-002	2.042-002	4.958-002	5.884-003	1.177-002	1.557-002	4.634-002
0.50	3.445-003	1.866-002	4.078-002	1.143-001	5.730-003	2.120-002	3.057-002	5.785-002	8.884-003	1.361-002	2.370-002	5.547-002
0.60	4.861-003	2.200-002	5.632-002	1.305-001	7.755-003	2.434-002	4.179-002	6.378-002	1.227-002	1.479-002	3.309-002	6.312-002
0.70	6.468-003	2.517-002	7.304-002	1.435-001	9.814-003	2.701-002	5.353-002	6.725-002	1.592-002	1.527-002	4.346-002	6.915-002
0.80	8.239-003	2.813-002	9.029-002	1.534-001	1.179-002	2.924-002	6.521-002	6.824-002	1.967-002	1.499-002	5.453-002	7.343-002
0.90	1.015-002	3.087-002	1.075-001	1.602-001	1.358-002	3.109-002	7.632-002	6.689-002	2.340-002	1.396-002	6.602-002	7.591-002
1.00	1.218-002	3.338-002	1.240-001	1.640-001	1.509-002	3.262-002	8.635-002	6.343-002	2.696-002	1.219-002	7.766-002	7.654-002
1.10	1.430-002	3.565-002	1.394-001	1.650-001	1.625-002	3.394-002	9.487-002	5.817-002	3.021-002	9.712-003	8.915-002	7.533-002
1.20	1.649-002	3.766-002	1.530-001	1.635-001	1.702-002	3.515-002	1.015-001	5.153-002	3.302-002	6.585-003	1.002-001	7.229-002
1.30	1.871-002	3.940-002	1.644-001	1.600-001	1.737-002	3.637-002	1.060-001	4.399-002	3.525-002	2.891-003	1.105-001	6.749-002
1.40	2.093-002	4.085-002	1.733-001	1.549-001	1.733-002	3.774-002	1.082-001	3.611-002	3.679-002	-1.261-003	1.198-001	6.104-002
1.50	2.309-002	4.201-002	1.793-001	1.488-001	1.694-002	3.938-002	1.080-001	2.850-002	3.752-002	-5.728-003	1.277-001	5.310-002
1.60	2.516-002	4.287-002	1.822-001	1.424-001	1.629-002	4.140-002	1.056-001	2.179-002	3.737-002	-1.034-002	1.340-001	4.392-002
1.70	2.707-002	4.344-002	1.819-001	1.364-001	1.550-002	4.389-002	1.012-001	1.663-002	3.628-002	-1.488-002	1.382-001	3.382-002
1.80	2.874-002	4.375-002	1.787-001	1.317-001	1.474-002	4.692-002	9.527-002	1.356-002	3.427-002	-1.913-002	1.403-001	2.324-002
1.90	3.013-002	4.384-002	1.728-001	1.291-001	1.416-002	5.047-002	8.855-002	1.301-002	3.142-002	-2.285-002	1.400-001	1.269-002
2.00	3.116-002	4.377-002	1.649-001	1.292-001	1.396-002	5.449-002	8.179-002	1.520-002	2.786-002	-2.581-002	1.374-001	2.753-003
2.10	3.180-002	4.364-002	1.559-001	1.324-001	1.428-002	5.887-002	7.585-002	2.008-002	2.383-002	-2.785-002	1.327-001	-6.003-003
2.20	3.204-002	4.354-002	1.466-001	1.392-001	1.522-002	6.342-002	7.154-002	2.730-002	1.960-002	-2.886-002	1.262-001	-1.306-002
2.30	3.189-002	4.358-002	1.380-001	1.493-001	1.683-002	6.797-002	6.953-002	3.628-002	1.544-002	-2.885-002	1.185-001	-1.804-002
2.40	3.139-002	4.384-002	1.310-001	1.623-001	1.908-002	7.231-002	7.023-002	4.627-002	1.165-002	-2.787-002	1.101-001	-2.071-002
2.50	3.062-002	4.439-002	1.263-001	1.777-001	2.187-002	7.627-002	7.379-002	5.644-002	8.456-003	-2.611-002	1.016-001	-2.105-002
2.60	2.965-002	4.529-002	1.243-001	1.948-001	2.508-002	7.974-002	8.009-002	6.600-002	6.011-003	-2.377-002	9.352-002	-1.920-002
2.70	2.856-002	4.657-002	1.252-001	2.128-001	2.853-002	8.262-002	8.881-002	7.428-002	4.407-003	-2.108-002	8.640-002	-1.541-002
2.80	2.744-002	4.822-002	1.290-001	2.310-001	3.208-002	8.492-002	9.949-002	8.080-002	3.660-003	-1.827-002	8.053-002	-9.998-003
2.90	2.635-002	5.023-002	1.354-001	2.488-001	3.557-002	8.666-002	1.116-001	8.522-002	3.734-003	-1.554-002	7.612-002	-3.328-003
3.00	2.534-002	5.260-002	1.442-001	2.659-001	3.889-002	8.790-002	1.246-001	8.739-002	4.555-003	-1.306-002	7.330-002	4.271-003
3.10	2.446-002	5.528-002	1.552-001	2.817-001	4.195-002	8.870-002	1.381-001	8.727-002	6.027-003	-1.096-002	7.211-002	1.250-002
3.20	2.376-002	5.827-002	1.679-001	2.962-001	4.466-002	8.918-002	1.515-001	8.490-002	8.047-003	-9.361-003	7.256-002	2.110-002
3.30	2.325-002	6.153-002	1.822-001	3.091-001	4.700-002	8.941-002	1.646-001	8.039-002	1.051-002	-8.326-003	7.464-002	2.986-002
3.40	2.297-002	6.506-002	1.978-001	3.204-001	4.893-002	8.949-002	1.770-001	7.388-002	1.330-002	-7.923-003	7.834-002	3.859-002
3.50	2.295-002	6.885-002	2.145-001	3.300-001	5.046-002	8.950-002	1.884-001	6.551-002	1.633-002	-8.204-003	8.366-002	4.714-002
3.60	2.323-002	7.287-002	2.321-001	3.377-001	5.157-002	8.953-002	1.986-001	5.546-002	1.949-002	-9.216-003	9.063-002	5.534-002
3.70	2.384-002	7.713-002	2.504-001	3.435-001	5.229-002	8.967-002	2.074-001	4.388-002	2.268-002	-1.100-002	9.928-002	6.304-002
3.80	2.485-002	8.161-002	2.694-001	3.472-001	5.264-002	9.000-002	2.145-001	3.096-002	2.577-002	-1.361-002	1.097-001	7.001-002
3.90	2.631-002	8.628-002	2.888-001	3.486-001	5.265-002	9.060-002	2.196-001	1.690-002	2.862-002	-1.709-002	1.219-001	7.601-002
4.00	2.831-002	9.113-002	3.084-001	3.475-001	5.239-002	9.155-002	2.225-001	1.968-003	3.107-002	-2.145-002	1.360-001	8.071-002
4.50	4.965-002	1.145-001	3.932-001	2.963-001	5.039-002	1.040-001	1.950-001	-6.993-002	2.886-002	-5.545-002	2.321-001	6.615-002
5.00	8.854-002	1.158-001	3.765-001	1.955-001	6.244-002	1.258-001	1.194-001	-6.709-002	-1.744-002	-8.007-002	3.017-001	-5.858-002

Table A9b
Pressure Coefficients
$T = 0.3 \quad H = 0.2$

kd	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	2.541-011 -8.500-004	8.967-011 -3.000-003	3.437-011 -1.150-003	-2.431-011 -8.500-004	8.997-011 -3.000-003	-3.289-011 -1.150-003
0.05	1.585-008 -4.249-003	5.592-008 -1.499-002	2.143-008 -5.744-003	1.591-008 -4.250-003	5.618-008 -1.500-002	2.152-008 -5.750-003
0.10	2.519-007 -8.488-003	8.881-007 -2.992-002	3.402-007 -1.145-002	2.541-007 -8.497-003	8.961-007 -2.999-002	3.432-007 -1.150-002
0.15	1.261-006 -1.271-002	4.442-006 -4.472-002	1.699-006 -1.709-002	1.282-006 -1.274-002	4.514-006 -4.495-002	1.727-006 -1.724-002
0.20	3.925-006 -1.691-002	1.380-005 -5.934-002	5.272-006 -2.262-002	4.029-006 -1.697-002	1.417-005 -5.989-002	5.411-006 -2.297-002
0.30	1.901-005 -2.519-002	6.652-005 -8.778-002	2.530-005 -3.322-002	2.009-005 -2.542-002	7.030-005 -8.963-002	2.673-005 -3.441-002
0.40	5.642-005 -3.327-002	1.962-004 -1.148-001	7.414-005 -4.301-002	6.218-005 -3.381-002	2.161-004 -1.191-001	8.168-005 -4.579-002
0.50	1.269-004 -4.110-002	4.373-004 -1.400-001	1.640-004 -5.174-002	1.479-004 -4.214-002	5.096-004 -1.484-001	1.910-004 -5.711-002
0.60	2.372-004 -4.865-002	8.095-004 -1.631-001	3.007-004 -5.921-002	2.972-004 -5.040-002	1.013-003 -1.773-001	3.759-004 -6.838-002
0.70	3.869-004 -5.587-002	1.305-003 -1.836-001	4.797-004 -6.523-002	5.312-004 -5.861-002	1.788-003 -2.060-001	6.553-004 -7.961-002
0.80	5.652-004 -6.274-002	1.883-003 -2.014-001	6.837-004 -6.967-002	8.702-004 -6.675-002	2.886-003 -2.343-001	1.043-003 -9.081-002
0.90	7.488-004 -6.923-002	2.461-003 -2.163-001	8.834-004 -7.239-002	1.333-003 -7.486-002	4.347-003 -2.624-001	1.544-003 -1.020-001
1.00	9.010-004 -7.533-002	2.927-003 -2.280-001	1.040-003 -7.328-002	1.935-003 -8.295-002	6.191-003 -2.903-001	2.156-003 -1.132-001
1.10	9.722-004 -8.099-002	3.137-003 -2.362-001	1.113-003 -7.226-002	2.687-003 -9.104-002	8.414-003 -3.180-001	2.865-003 -1.245-001
1.20	9.022-004 -8.618-002	2.939-003 -2.409-001	1.063-003 -6.925-002	3.593-003 -9.916-002	1.099-002 -3.457-001	3.648-003 -1.358-001
1.30	6.238-004 -9.084-002	2.189-003 -2.418-001	8.666-004 -6.421-002	4.648-003 -1.073-001	1.385-002 -3.732-001	4.470-003 -1.472-001
1.40	6.915-005 -9.489-002	7.751-004 -2.386-001	5.246-004 -5.711-002	5.841-003 -1.156-001	1.693-002 -4.008-001	5.289-003 -1.587-001
1.50	-8.215-004 -9.824-002	-1.351-003 -2.311-001	6.873-005 -4.795-002	7.144-003 -1.240-001	2.009-002 -4.283-001	6.059-003 -1.702-001
1.60	-2.090-003 -1.008-001	-4.152-003 -2.193-001	-4.319-004 -3.680-002	8.520-003 -1.326-001	2.322-002 -4.557-001	6.736-003 -1.818-001
1.70	-3.747-003 -1.023-001	-7.485-003 -2.028-001	-8.729-004 -2.377-002	9.918-003 -1.414-001	2.616-002 -4.830-001	7.284-003 -1.933-001
1.80	-5.763-003 -1.028-001	-1.110-002 -1.817-001	-1.125-003 -9.066-003	1.128-002 -1.503-001	2.879-002 -5.101-001	7.687-003 -2.048-001
1.90	-8.061-003 -1.020-001	-1.465-002 -1.562-001	-1.055-003 7.024-003	1.253-002 -1.594-001	3.100-002 -5.366-001	7.957-003 -2.160-001
2.00	-1.052-002 -9.990-002	-1.776-002 -1.265-001	-5.523-004 2.411-002	1.362-002 -1.686-001	3.277-002 -5.624-001	8.140-003 -2.269-001
2.10	-1.297-002 -9.642-002	-2.005-002 -9.318-002	4.368-004 4.174-002	1.449-002 -1.778-001	3.412-002 -5.872-001	8.318-003 -2.375-001
2.20	-1.526-002 -9.157-002	-2.126-002 -5.699-002	1.887-003 5.940-002	1.511-002 -1.870-001	3.519-002 -6.107-001	8.605-003 -2.476-001
2.30	-1.720-002 -8.546-002	-2.129-002 -1.880-002	3.684-003 7.657-002	1.549-002 -1.961-001	3.619-002 -6.327-001	9.132-003 -2.574-001
2.40	-1.868-002 -7.821-002	-2.020-002 2.048-002	5.633-003 9.279-002	1.566-002 -2.049-001	3.738-002 -6.531-001	1.003-002 -2.667-001
2.50	-1.964-002 -7.002-002	-1.829-002 5.995-002	7.486-003 1.077-001	1.567-002 -2.135-001	3.907-002 -6.717-001	1.142-002 -2.757-001
2.60	-2.005-002 -6.108-002	-1.596-002 9.885-002	8.985-003 1.209-001	1.559-002 -2.216-001	4.155-002 -6.887-001	1.340-002 -2.845-001
2.70	-1.997-002 -5.159-002	-1.369-002 1.365-001	9.891-003 1.322-001	1.552-002 -2.294-001	4.509-002 -7.040-001	1.600-002 -2.933-001
2.80	-1.950-002 -4.170-002	-1.198-002 1.726-001	1.002-002 1.416-001	1.555-002 -2.367-001	4.989-002 -7.179-001	1.925-002 -3.021-001
2.90	-1.876-002 -3.153-002	-1.126-002 2.066-001	9.266-003 1.490-001	1.575-002 -2.436-001	5.613-002 -7.305-001	2.314-002 -3.111-001
3.00	-1.787-002 -2.116-002	-1.186-002 2.386-001	7.585-003 1.542-001	1.622-002 -2.501-001	6.393-002 -7.420-001	2.763-002 -3.203-001
3.10	-1.696-002 -1.062-002	-1.400-002 2.683-001	5.014-003 1.575-001	1.703-002 -2.562-001	7.337-002 -7.525-001	3.265-002 -3.300-001
3.20	-1.615-002 7.576-005	-1.776-002 2.957-001	1.646-003 1.586-001	1.825-002 -2.619-001	8.452-002 -7.622-001	3.814-002 -3.402-001
3.30	-1.552-002 1.095-002	-2.312-002 3.209-001	-2.373-003 1.578-001	1.995-002 -2.673-001	9.743-002 -7.713-001	4.401-002 -3.509-001
3.40	-1.515-002 2.203-002	-2.993-002 3.438-001	-6.867-003 1.548-001	2.220-002 -2.724-001	1.121-001 -7.799-001	5.018-002 -3.623-001
3.50	-1.507-002 3.338-002	-3.795-002 3.644-001	-1.163-002 1.498-001	2.510-002 -2.772-001	1.287-001 -7.883-001	5.655-002 -3.744-001
3.60	-1.530-002 4.507-002	-4.683-002 3.828-001	-1.646-002 1.427-001	2.874-002 -2.817-001	1.471-001 -7.966-001	6.300-002 -3.872-001
3.70	-1.580-002 5.718-002	-5.615-002 3.990-001	-2.114-002 1.336-001	3.321-002 -2.861-001	1.675-001 -8.051-001	6.941-002 -4.008-001
3.80	-1.651-002 6.977-002	-6.542-002 4.127-001	-2.548-002 1.222-001	3.865-002 -2.904-001	1.898-001 -8.140-001	7.563-002 -4.153-001
3.90	-1.734-002 8.293-002	-7.404-002 4.241-001	-2.929-002 1.088-001	4.519-002 -2.948-001	2.141-001 -8.237-001	8.147-002 -4.305-001
4.00	-1.811-002 9.672-002	-8.138-002 4.328-001	-3.246-002 9.308-002	5.296-002 -2.994-001	2.402-001 -8.346-001	8.673-002 -4.466-001
4.50	-1.132-002 1.747-001	-7.550-002 4.228-001	-3.886-002 -1.838-002	1.135-001 -3.371-001	3.848-001 -9.257-001	9.574-002 -5.338-001
5.00	4.151-002 2.337-001	1.161-002 2.489-001	-5.296-002 -1.593-001	1.805-001 -4.422-001	4.513-001 -1.082+000	7.202-002 -5.910-001

Table A10a
Impedance Coefficients
$T = 0.5 \quad H = 0.2$

ka	Z_1		Z_2		Z_3		Z_4		Z_5		Z_6	
0.01	8.032-007	2.457-004	3.571-005	4.612-003	2.232-006	3.753-004	1.786-005	1.605-003	2.678-006	2.028-004	1.071-005	1.237-003
0.05	2.007-005	1.228-003	8.919-004	2.303-002	5.571-005	1.874-003	4.458-004	8.008-003	6.688-005	1.012-003	2.676-004	6.178-003
0.10	8.017-005	2.454-003	3.556-003	4.587-002	2.217-004	3.734-003	1.776-003	1.591-002	2.666-004	2.008-003	1.068-003	1.231-002
0.15	1.800-004	3.675-003	7.955-003	6.834-002	4.944-004	5.564-003	3.966-003	2.358-002	5.966-004	2.975-003	2.393-003	1.835-002
0.20	3.189-004	4.889-003	1.403-002	9.025-002	8.683-004	7.350-003	6.981-003	3.094-002	1.052-003	3.898-003	4.231-003	2.424-002
0.30	7.112-004	7.288-003	3.089-002	1.317-001	1.887-003	1.074-002	1.527-002	4.432-002	2.317-003	5.558-003	9.373-003	3.545-002
0.40	1.249-003	9.636-003	5.327-002	1.692-001	3.197-003	1.383-002	2.610-002	5.537-002	3.997-003	6.892-003	1.632-002	4.582-002
0.50	1.925-003	1.192-002	8.014-002	2.016-001	4.699-003	1.656-002	3.881-002	6.361-002	6.012-003	7.821-003	2.484-002	5.450-002
0.60	2.728-003	1.413-002	1.103-001	2.284-001	6.285-003	1.890-002	5.264-002	6.877-002	8.273-003	8.287-003	3.469-002	6.189-002
0.70	3.652-003	1.626-002	1.426-001	2.493-001	7.845-003	2.088-002	6.684-002	7.074-002	1.068-002	8.251-003	4.562-002	6.763-002
0.80	4.689-003	1.830-002	1.757-001	2.641-001	9.283-003	2.251-002	8.066-002	6.960-002	1.314-002	7.690-003	5.737-002	7.162-002
0.90	5.836-003	2.025-002	2.086-001	2.730-001	1.051-002	2.387-002	9.342-002	6.559-002	1.555-002	6.598-003	6.969-002	7.376-002
1.00	7.088-003	2.209-002	2.401-001	2.761-001	1.147-002	2.503-002	1.045-001	5.908-002	1.782-002	4.979-003	8.235-002	7.400-002
1.10	8.444-003	2.381-002	2.694-001	2.740-001	1.211-002	2.610-002	1.134-001	5.053-002	1.984-002	2.853-003	9.510-002	7.227-002
1.20	9.900-003	2.541-002	2.953-001	2.671-001	1.242-002	2.717-002	1.198-001	4.054-002	2.151-002	2.543-004	1.077-001	6.851-002
1.30	1.145-002	2.684-002	3.171-001	2.562-001	1.242-002	2.835-002	1.232-001	2.978-002	2.273-002	-2.765-003	1.197-001	6.269-002
1.40	1.308-002	2.810-002	3.340-001	2.423-001	1.214-002	2.977-002	1.235-001	1.902-002	2.338-002	-6.127-003	1.309-001	5.481-002
1.50	1.477-002	2.916-002	3.452-001	2.263-001	1.166-002	3.150-002	1.209-001	9.101-003	2.338-002	-9.723-003	1.409-001	4.491-002
1.60	1.649-002	2.998-002	3.503-001	2.096-001	1.111-002	3.364-002	1.156-001	8.722-004	2.264-002	-1.341-002	1.491-001	3.316-002
1.70	1.819-002	3.055-002	3.491-001	1.938-001	1.061-002	3.621-002	1.080-001	-4.849-003	2.111-002	-1.700-002	1.552-001	1.985-002
1.80	1.981-002	3.086-002	3.419-001	1.806-001	1.033-002	3.920-002	9.907-002	-7.398-003	1.880-002	-2.030-002	1.587-001	5.445-003
1.90	2.129-002	3.091-002	3.294-001	1.716-001	1.043-002	4.256-002	8.982-002	-6.379-003	1.577-002	-2.308-002	1.592-001	-9.441-003
2.00	2.257-002	3.074-002	3.131-001	1.682-001	1.102-002	4.614-002	8.144-002	-1.769-003	1.218-002	-2.515-002	1.567-001	-2.406-002
2.10	2.358-002	3.040-002	2.946-001	1.715-001	1.219-002	4.977-002	7.511-002	6.022-003	8.235-003	-2.637-002	1.513-001	-3.761-002
2.20	2.428-002	2.997-002	2.760-001	1.816-001	1.392-002	5.326-002	7.179-002	1.619-002	4.195-003	-2.668-002	1.433-001	-4.939-002
2.30	2.468-002	2.952-002	2.593-001	1.983-001	1.617-002	5.644-002	7.209-002	2.764-002	3.192-004	-2.609-002	1.334-001	-5.882-002
2.40	2.477-002	2.914-002	2.461-001	2.206-001	1.879-002	5.916-002	7.618-002	3.918-002	-3.166-003	-2.472-002	1.222-001	-6.559-002
2.50	2.460-002	2.888-002	2.376-001	2.472-001	2.162-002	6.134-002	8.385-002	4.969-002	-6.090-003	-2.273-002	1.106-001	-6.963-002
2.60	2.422-002	2.881-002	2.344-001	2.765-001	2.451-002	6.298-002	9.456-002	5.827-002	-8.355-003	-2.034-002	9.913-002	-7.106-002
2.70	2.368-002	2.893-002	2.368-001	3.072-001	2.729-002	6.410-002	1.076-001	6.427-002	-9.929-003	-1.772-002	8.834-002	-7.017-002
2.80	2.303-002	2.928-002	2.445-001	3.380-001	2.985-002	6.478-002	1.222-001	6.731-002	-1.083-002	-1.506-002	7.861-002	-6.731-002
2.90	2.232-002	2.984-002	2.571-001	3.680-001	3.209-002	6.511-002	1.376-001	6.726-002	-1.112-002	-1.250-002	7.019-002	-6.286-002
3.00	2.158-002	3.062-002	2.742-001	3.964-001	3.397-002	6.521-002	1.531-001	6.414-002	-1.088-002	-1.015-002	6.320-002	-5.715-002
3.10	2.084-002	3.159-002	2.952-001	4.226-001	3.545-002	6.516-002	1.681-001	5.810-002	-1.018-002	-8.096-003	5.773-002	-5.049-002
3.20	2.013-002	3.275-002	3.196-001	4.463-001	3.654-002	6.508-002	1.822-001	4.934-002	-9.111-003	-6.403-003	5.379-002	-4.313-002
3.30	1.946-002	3.409-002	3.471-001	4.671-001	3.725-002	6.505-002	1.949-001	3.811-002	-7.763-003	-5.112-003	5.141-002	-3.529-002
3.40	1.885-002	3.560-002	3.772-001	4.848-001	3.762-002	6.516-002	2.057-001	2.469-002	-6.213-003	-4.257-003	5.058-002	-2.713-002
3.50	1.831-002	3.729-002	4.097-001	4.989-001	3.768-002	6.548-002	2.145-001	9.389-003	-4.542-003	-3.864-003	5.135-002	-1.885-002
3.60	1.785-002	3.913-002	4.441-001	5.093-001	3.749-002	6.608-002	2.209-001	-7.452-003	-2.832-003	-3.952-003	5.376-002	-1.059-002
3.70	1.750-002	4.115-002	4.802-001	5.155-001	3.713-002	6.701-002	2.245-001	-2.544-002	-1.172-003	-4.534-003	5.784-002	-2.575-003
3.80	1.728-002	4.332-002	5.173-001	5.171-001	3.668-002	6.833-002	2.251-001	-4.412-002	3.419-004	-5.616-003	6.368-002	4.986-003
3.90	1.721-002	4.566-002	5.548-001	5.136-001	3.623-002	7.006-002	2.225-001	-6.293-002	1.603-003	-7.188-003	7.130-002	1.181-002
4.00	1.733-002	4.815-002	5.920-001	5.048-001	3.590-002	7.221-002	2.166-001	-8.123-002	2.495-003	-9.220-003	8.073-002	1.755-002
4.50	2.177-002	6.203-002	7.315-001	3.805-001	3.984-002	8.718-002	1.448-001	-1.385-001	-2.572-003	-2.299-002	1.490-001	1.587-002
5.00	3.381-002	7.416-002	7.049-001	2.206-001	5.511-002	9.708-002	7.793-002	-1.032-001	-2.506-002	-2.677-002	2.074-001	-5.819-002

Table A10b
Pressure Coefficients
$T = 0.5 \quad H = 0.2$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	3.751-011 -7.500-004	2.500-010 -5.000-003	6.251-011 -1.250-003	6.442-012 -7.500-004	2.500-010 -5.000-003	-1.074-011 -1.250-003
0.05	2.339-008 -3.749-003	1.559-007 -2.498-002	3.896-008 -6.242-005	2.341-008 -3.749-003	1.561-007 -2.500-002	3.900-008 -6.249-003
0.10	3.719-007 -7.492-003	2.476-006 -4.985-002	6.182-007 -1.244-002	3.738-007 -7.496-003	2.489-006 -4.997-002	6.214-007 -1.249-002
0.15	1.863-006 -1.122-002	1.238-005 -7.449-002	3.087-006 -1.854-002	1.885-006 -1.124-002	1.253-005 -7.488-002	3.123-006 -1.873-002
0.20	5.799-006 -1.493-002	3.846-005 -9.880-002	9.568-006 -2.450-002	5.924-006 -1.496-002	3.929-005 -9.973-002	9.774-006 -2.495-002
0.30	2.812-005 -2.228-002	1.853-004 -1.460-001	4.581-005 -3.584-002	2.953-005 -2.238-002	1.946-004 -1.491-001	4.809-005 -3.735-002
0.40	8.366-005 -2.950-002	5.464-004 -1.907-001	1.339-004 -4.613-002	9.136-005 -2.974-002	5.965-004 -1.979-001	1.461-004 -4.968-002
0.50	1.888-004 -3.656-002	1.219-003 -2.321-001	2.954-004 -5.507-002	2.172-004 -3.701-002	1.402-003 -2.462-001	3.395-004 -6.192-002
0.60	3.552-004 -4.345-002	2.261-003 -2.699-001	5.406-004 -6.243-002	4.368-004 -4.419-002	2.778-003 -2.937-001	6.631-004 -7.408-002
0.70	5.846-004 -5.016-002	3.663-003 -3.034-001	8.620-004 -6.799-002	7.816-004 -5.130-002	4.885-003 -3.406-001	1.146-003 -8.621-002
0.80	8.652-004 -5.672-002	5.327-003 -3.323-001	1.232-003 -7.159-002	1.283-003 -5.833-002	7.862-003 -3.869-001	1.806-003 -9.833-002
0.90	1.169-003 -6.310-002	7.062-003 -3.562-001	1.603-003 -7.310-002	1.973-003 -6.532-002	1.181-002 -4.327-001	2.647-003 -1.105-001
1.00	1.448-003 -6.934-002	8.592-003 -3.749-001	1.918-003 -7.241-002	2.877-003 -7.228-002	1.678-002 -4.782-001	3.656-003 -1.227-001
1.10	1.638-003 -7.541-002	9.580-003 -3.880-001	2.116-003 -6.942-002	4.017-003 -7.927-002	2.277-002 -5.235-001	4.800-003 -1.351-001
1.20	1.655-003 -8.129-002	9.656-003 -3.953-001	2.147-003 -6.409-002	5.410-003 -8.633-002	2.970-002 -5.688-001	6.030-003 -1.476-001
1.30	1.404-003 -8.695-002	8.475-003 -3.961-001	1.989-003 -5.638-002	7.057-003 -9.351-002	3.741-002 -6.143-001	7.278-003 -1.602-001
1.40	7.833-004 -9.231-002	5.772-003 -3.903-001	1.661-003 -4.630-002	8.945-003 -1.009-001	4.567-002 -6.600-001	8.466-003 -1.731-001
1.50	-3.014-004 -9.724-002	1.430-003 -3.771-001	1.232-003 -3.390-002	1.104-002 -1.085-001	5.416-002 -7.061-001	9.511-003 -1.860-001
1.60	-1.923-003 -1.016-001	-4.457-003 -3.563-001	8.278-004 -1.932-002	1.329-002 -1.165-001	6.250-002 -7.524-001	1.034-002 -1.990-001
1.70	-4.114-003 -1.052-001	-1.154-002 -3.275-001	6.182-004 -2.804-003	1.560-002 -1.248-001	7.028-002 -7.987-001	1.091-002 -2.119-001
1.80	-6.844-003 -1.079-001	-1.922-002 -2.906-001	7.903-004 1.528-002	1.787-002 -1.336-001	7.712-002 -8.447-001	1.122-002 -2.245-001
1.90	-1.001-002 -1.094-001	-2.669-002 -2.459-001	1.507-003 3.443-002	1.996-002 -1.428-001	8.274-002 -8.898-001	1.133-002 -2.368-001
2.00	-1.344-002 -1.095-001	-3.311-002 -1.941-001	2.857-003 5.405-002	2.176-002 -1.523-001	8.707-002 -9.333-001	1.138-002 -2.485-001
2.10	-1.690-002 -1.083-001	-3.771-002 -1.365-001	4.816-003 7.344-002	2.314-002 -1.620-001	9.027-002 -9.744-001	1.157-002 -2.595-001
2.20	-2.014-002 -1.056-001	-4.005-002 -7.444-002	7.222-003 9.192-002	2.404-002 -1.718-001	9.275-002 -1.012+000	1.212-002 -2.699-001
2.30	-2.294-002 -1.017-001	-4.009-002 -9.787-003	9.800-003 1.089-001	2.444-002 -1.816-001	9.516-002 -1.047+000	1.328-002 -2.798-001
2.40	-2.513-002 -9.666-002	-3.819-002 5.577-002	1.220-002 1.239-001	2.437-002 -1.912-001	9.826-002 -1.078+000	1.526-002 -2.891-001
2.50	-2.661-002 -9.072-002	-3.506-002 1.207-001	1.408-002 1.365-001	2.391-002 -2.004-001	1.029-001 -1.104+000	1.819-002 -2.983-001
2.60	-2.739-002 -8.410-002	-3.161-002 1.838-001	1.514-002 1.466-001	2.316-002 -2.092-001	1.097-001 -1.127+000	2.215-002 -3.075-001
2.70	-2.752-002 -7.701-002	-2.876-002 2.443-001	1.517-002 1.541-001	2.225-002 -2.174-001	1.194-001 -1.146+000	2.714-002 -3.170-001
2.80	-2.711-002 -6.961-002	-2.733-002 3.016-001	1.408-002 1.590-001	2.129-002 -2.251-001	1.324-001 -1.162+000	3.311-002 -3.269-001
2.90	-2.630-002 -6.199-002	-2.794-002 3.554-001	1.189-002 1.613-001	2.039-002 -2.323-001	1.492-001 -1.176+000	3.994-002 -3.376-001
3.00	-2.523-002 -5.422-002	-3.097-002 4.056-001	8.681-003 1.610-001	1.966-002 -2.389-001	1.702-001 -1.187+000	4.751-002 -3.491-001
3.10	-2.402-002 -4.633-002	-3.656-002 4.522-001	4.640-003 1.582-001	1.918-002 -2.450-001	1.954-001 -1.196+000	5.566-002 -3.616-001
3.20	-2.279-002 -3.830-002	-4.464-002 4.952-001	-2.141-005 1.530-001	1.905-002 -2.506-001	2.252-001 -1.204+000	6.422-002 -3.752-001
3.30	-2.163-002 -3.009-002	-5.492-002 5.344-001	-5.066-003 1.453-001	1.938-002 -2.557-001	2.598-001 -1.211+000	7.298-002 -3.901-001
3.40	-2.061-002 -2.167-002	-6.694-002 5.700-001	-1.025-002 1.353-001	2.025-002 -2.603-001	2.994-001 -1.218+000	8.174-002 -4.063-001
3.50	-1.975-002 -1.296-002	-8.012-002 6.018-001	-1.535-002 1.228-001	2.179-002 -2.644-001	3.442-001 -1.225+000	9.025-002 -4.238-001
3.60	-1.909-002 -3.927-003	-9.375-002 6.296-001	-2.016-002 1.079-001	2.413-002 -2.682-001	3.943-001 -1.232+000	9.824-002 -4.427-001
3.70	-1.860-002 5.506-003	-1.070-001 6.532-001	-2.452-002 9.082-002	2.740-002 -2.717-001	4.497-001 -1.242+000	1.054-001 -4.629-001
3.80	-1.825-002 1.539-002	-1.192-001 6.722-001	-2.831-002 7.149-002	3.179-002 -2.750-001	5.103-001 -1.254+000	1.114-001 -4.842-001
3.90	-1.796-002 2.576-002	-1.293-001 6.862-001	-3.149-002 5.010-002	3.743-002 -2.782-001	5.758-001 -1.270+000	1.160-001 -5.066-001
4.00	-1.764-002 3.663-002	-1.367-001 6.946-001	-3.407-002 2.685-002	4.450-002 -2.817-001	6.455-001 -1.292+000	1.187-001 -5.297-001
4.50	-1.157-002 9.650-002	-1.189-001 6.265-001	-4.096-002 -1.043-001	1.029-001 -3.145-001	1.002+000 -1.505+000	1.006-001 -6.371-001
5.00	5.902-003 1.523-001	-4.135-002 3.447-001	-4.114-002 -2.066-001	1.748-001 -4.075-001	1.183+000 -1.824+000	6.702-002 -6.846-001

Table A11a
Impedance Coefficients
$T = 0.05 \quad H = 0.5$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	1.087-005	2.308-003	4.549-007	7.958-005	1.190-005	1.864-003	4.653-006	4.815-004	2.274-005	2.048-003	4.447-006	5.492-004
0.05	2.716-004	1.153-002	1.136-005	3.975-004	2.971-004	9.310-003	1.162-004	2.403-003	5.681-004	1.022-002	1.111-004	2.743-003
0.10	1.085-003	2.303-002	4.534-005	7.928-004	1.184-003	1.855-002	4.633-004	4.781-003	2.267-003	2.033-002	4.436-004	5.468-003
0.15	2.437-003	3.446-002	1.016-004	1.184-003	2.647-003	2.766-002	1.037-003	7.109-003	5.080-003	3.022-002	9.950-004	8.156-003
0.20	4.321-003	4.580-002	1.794-004	1.568-003	4.666-003	3.657-002	1.830-003	9.362-003	8.980-003	3.978-002	1.761-003	1.079-002
0.30	9.651-003	6.804-002	3.968-004	2.308-003	1.024-002	5.354-002	4.032-003	1.355-002	1.988-002	5.750-002	3.914-003	1.582-002
0.40	1.699-002	8.953-002	6.886-004	2.999-003	1.759-002	6.904-002	6.960-003	1.719-002	3.457-002	7.272-002	6.840-003	2.043-002
0.50	2.622-002	1.100-001	1.043-003	3.628-003	2.630-002	8.273-002	1.048-002	2.013-002	5.251-002	8.475-002	1.046-002	2.451-002
0.60	3.724-002	1.294-001	1.448-003	4.183-003	3.588-002	9.439-002	1.441-002	2.228-002	7.307-002	9.302-002	1.468-002	2.796-002
0.70	4.990-002	1.473-001	1.888-003	4.659-003	4.582-002	1.039-001	1.860-002	2.356-002	9.555-002	9.708-002	1.941-002	3.068-002
0.80	6.409-002	1.638-001	2.347-003	5.049-003	5.559-002	1.113-001	2.283-002	2.395-002	1.192-001	9.656-002	2.452-002	3.262-002
0.90	7.967-002	1.784-001	2.810-003	5.351-003	6.465-002	1.167-001	2.693-002	2.345-002	1.431-001	9.120-002	2.991-002	3.369-002
1.00	9.650-002	1.912-001	3.260-003	5.565-003	7.250-002	1.203-001	3.069-002	2.210-002	1.665-001	8.085-002	3.545-002	3.385-002
1.10	1.144-001	2.017-001	3.680-003	5.693-003	7.868-002	1.226-001	3.393-002	1.998-002	1.883-001	6.544-002	4.099-002	3.304-002
1.20	1.332-001	2.098-001	4.051-003	5.740-003	8.280-002	1.241-001	3.646-002	1.721-002	2.074-001	4.509-002	4.637-002	3.123-002
1.30	1.524-001	2.150-001	4.356-003	5.714-003	8.459-002	1.253-001	3.809-002	1.397-002	2.227-001	2.013-002	5.140-002	2.838-002
1.40	1.717-001	2.171-001	4.575-003	5.630-003	8.392-002	1.272-001	3.870-002	1.049-002	2.328-001	-8.781-003	5.583-002	2.452-002
1.50	1.903-001	2.157-001	4.690-003	5.508-003	8.092-002	1.305-001	3.817-002	7.065-003	2.364-001	-4.052-002	5.941-002	1.972-002
1.60	2.073-001	2.109-001	4.689-003	5.375-003	7.605-002	1.363-001	3.652-002	4.061-003	2.324-001	-7.343-002	6.183-002	1.415-002
1.70	2.217-001	2.027-001	4.566-003	5.265-003	7.015-002	1.452-001	3.386-002	1.861-003	2.202-001	-1.053-001	6.283-002	8.084-003
1.80	2.323-001	1.918-001	4.327-003	5.219-003	6.443-002	1.580-001	3.048-002	8.231-004	1.999-001	-1.333-001	6.222-002	1.947-003
1.90	2.382-001	1.794-001	3.997-003	5.272-003	6.037-002	1.745-001	2.681-002	1.197-003	1.727-001	-1.550-001	5.998-002	-3.756-003
2.00	2.389-001	1.670-001	3.611-003	5.453-003	5.940-002	1.941-001	2.340-002	3.041-003	1.412-001	-1.680-001	5.627-002	-8.502-003
2.10	2.345-001	1.564-001	3.217-003	5.771-003	6.262-002	2.156-001	2.077-002	6.178-003	1.084-001	-1.713-001	5.147-002	-1.186-002
2.20	2.260-001	1.490-001	2.862-003	6.217-003	7.046-002	2.373-001	1.933-002	1.023-002	7.783-002	-1.652-001	4.611-002	-1.359-002
2.30	2.144-001	1.458-001	2.582-003	6.765-003	8.268-002	2.578-001	1.928-002	1.470-002	5.221-002	-1.515-001	4.074-002	-1.367-002
2.40	2.014-001	1.474-001	2.396-003	7.378-003	9.845-002	2.757-001	2.061-002	1.909-002	3.334-002	-1.325-001	3.581-002	-1.229-002
2.50	1.883-001	1.537-001	2.311-003	8.022-003	1.167-001	2.904-001	2.312-002	2.301-002	2.190-002	-1.108-001	3.166-002	-9.759-003
2.60	1.761-001	1.641-001	2.318-003	8.668-003	1.362-001	3.016-001	2.655-002	2.619-002	1.762-002	-8.869-002	2.844-002	-6.401-003
2.70	1.655-001	1.781-001	2.404-003	9.293-003	1.560-001	3.094-001	3.061-002	2.850-002	1.966-002	-6.799-002	2.619-002	-2.520-003
2.80	1.568-001	1.951-001	2.551-003	9.887-003	1.754-001	3.142-001	3.502-002	2.992-002	2.695-002	-4.986-002	2.487-002	1.646-003
2.90	1.504-001	2.147-001	2.745-003	1.044-002	1.939-001	3.165-001	3.958-002	3.047-002	3.840-002	-3.502-002	2.440-002	5.934-003
3.00	1.463-001	2.365-001	2.973-003	1.096-002	2.111-001	3.168-001	4.412-002	3.024-002	5.306-002	-2.384-002	2.468-002	1.024-002
3.10	1.446-001	2.604-001	3.226-003	1.144-002	2.268-001	3.155-001	4.853-002	2.930-002	7.014-002	-1.650-002	2.565-002	1.452-002
3.20	1.452-001	2.863-001	3.498-003	1.189-002	2.410-001	3.129-001	5.274-002	2.772-002	8.905-002	-1.309-002	2.725-002	1.876-002
3.30	1.484-001	3.143-001	3.786-003	1.231-002	2.537-001	3.095-001	5.670-002	2.557-002	1.093-001	-1.370-002	2.948-002	2.297-002
3.40	1.545-001	3.447-001	4.089-003	1.271-002	2.647-001	3.055-001	6.038-002	2.290-002	1.307-001	-1.850-002	3.235-002	2.717-002
3.50	1.640-001	3.778-001	4.411-003	1.309-002	2.743-001	3.010-001	6.375-002	1.971-002	1.529-001	-2.779-002	3.595-002	3.139-002
3.60	1.777-001	4.140-001	4.756-003	1.344-002	2.822-001	2.965-001	6.677-002	1.602-002	1.756-001	-4.211-002	4.040-002	3.566-002
3.70	1.969-001	4.539-001	5.133-003	1.377-002	2.885-001	2.920-001	6.941-002	1.180-002	1.987-001	-6.227-002	4.592-002	3.996-002
3.80	2.234-001	4.[illegible]-001	5.551-003	1.408-002	2.931-001	2.879-001	7.158-002	6.997-003	2.214-001	-8.951-002	5.283-002	4.424-002
3.90	2.604-001	5.463-001	6.026-003	1.434-002	2.959-001	2.846-001	7.315-002	1.530-003	2.429-001	-1.256-001	6.157-002	4.831-002
4.00	3.122-001	5.983-001	6.573-003	1.453-002	2.967-001	2.826-001	7.387-002	-4.690-003	2.610-001	-1.730-001	7.277-002	5.177-002
4.50	1.004+000	5.730-001	9.359-003	1.185-002	2.986-001	3.389-001	4.337-002	-3.591-002	1.251-002	-5.805-001	1.713-001	-7.272-003
5.00	6.860-001	-2.444-001	3.162-003	1.178-002	4.423-001	3.306-001	3.457-002	5.971-003	-3.629-001	-8.735-002	5.562-002	-1.088-001

Table A11b
Pressure Coefficients
$T = 0.05 \quad H = 0.5$

x_d	p_1^0	p_2^0	p_3^0			p_2^{90}		p_3^{90}	
0.01	2.760-011	-2.437-003	5.661-012	-5.000-004	2.901-011	-2.562-003	-4.278-0	.437-003	6.256-012	-5.000-004	-4.497-011	-2.562-003
0.05	1.715-008	-1.218-002	3.517-009	-2.499-003	1.802-008	-1.280-002	1.892-0	.219-002	3.906-009	-2.500-003	1.988-008	-1.281-002
0.10	2.694-007	-2.435-002	5.522-008	-4.998-003	2.828-007	-2.553-002	3.042-0	.437-002	6.233-008	-4.997-003	3.193-007	-2.562-002
0.15	1.323-006	-3.648-002	2.707-007	-7.460-003	1.385-006	-3.813-002	1.535-0	3.654-002	3.141-007	-7.491-003	1.607-006	-3.842-002
0.20	3.997-006	-4.855-002	8.167-007	-9.906-003	4.174-006	-5.052-002	4.828-0	-4.870-002	9.865-007	-9.979-003	5.041-006	-5.120-002
0.30	1.764-005	-7.248-002	3.588-006	-1.468-002	1.828-005	-7.442-002	2.413-00	-7.296-002	4.905-006	-1.493-002	2.498-005	-7.672-002
0.40	4.464-005	-9.600-002	9.021-006	-1.926-002	4.577-005	-9.673-002	7.493-005	-9.711-002	1.512-005	-1.983-002	7.661-005	-1.021-001
0.50	7.544-005	-1.190-001	1.515-005	-2.358-002	7.665-005	-1.170-001	1.789-004	-1.211-001	3.577-005	-2.468-002	1.800-004	-1.274-001
0.60	7.541-005	-1.415-001	1.517-005	-2.758-002	7.754-005	-1.348-001	3.612-004	-1.450-001	7.141-005	-2.946-002	3.562-004	-1.526-001
0.70	-2.817-005	-1.633-001	-4.611-006	-3.122-002	-1.641-005	-1.496-001	6.488-004	-1.687-001	1.265-004	-3.415-002	6.247-004	-1.777-001
0.80	-3.585-004	-1.845-001	-6.626-005	-3.447-002	-3.047-004	-1.613-001	1.069-003	-1.923-001	2.052-004	-3.876-002	1.000-003	-2.026-001
0.90	-1.100-003	-2.050-001	-2.008-004	-3.727-002	-9.176-004	-1.693-001	1.647-003	-2.157-001	3.103-004	-4.327-002	1.490-003	-2.274-001
1.00	-2.506-003	-2.247-001	-4.473-004	-3.957-002	-2.003-003	-1.733-001	2.406-003	-2.389-001	4.436-004	-4.769-002	2.093-003	-2.521-001
1.10	-4.899-003	-2.435-001	-8.505-004	-4.133-002	-3.701-003	-1.729-001	3.359-003	-2.621-001	6.045-004	-5.200-002	2.794-003	-2.767-001
1.20	-8.661-003	-2.612-001	-1.455-003	-4.247-002	-6.106-003	-1.678-001	4.511-003	-2.851-001	7.902-004	-5.620-002	3.564-003	-3.012-001
1.30	-1.421-002	-2.773-001	-2.299-003	-4.290-002	-9.211-003	-1.573-001	5.852-003	-3.081-001	9.945-004	-6.029-002	4.360-003	-3.257-001
1.40	-2.194-002	-2.914-001	-3.398-003	-4.254-002	-1.285-002	-1.412-001	7.352-003	-3.311-001	1.208-003	-6.427-002	5.123-003	-3.501-001
1.50	-3.215-002	-3.026-001	-4.735-003	-4.125-002	-1.661-002	-1.190-001	8.952-003	-3.542-001	1.417-003	-6.812-002	5.785-003	-3.744-001
1.60	-4.490-002	-3.101-001	-6.241-003	-3.894-002	-1.982-002	-9.044-002	1.057-002	-3.773-001	1.607-003	-7.184-002	6.277-003	-3.985-001
1.70	-5.989-002	-3.127-001	-7.786-003	-3.550-002	-2.155-002	-5.575-002	1.208-002	-4.005-001	1.760-003	-7.541-002	6.549-003	-4.223-001
1.80	-7.634-002	-3.094-001	-9.180-003	-3.092-002	-2.073-002	-1.555-002	1.336-002	-4.237-001	1.863-003	-7.879-002	6.586-003	-4.457-001
1.90	-9.298-002	-2.994-001	-1.020-002	-2.526-002	-1.641-002	2.890-002	1.429-002	-4.469-001	1.910-003	-8.196-002	6.432-003	-4.685-001
2.00	-1.082-001	-2.827-001	-1.065-002	-1.871-002	-8.017-003	7.576-002	1.479-002	-4.698-001	1.904-003	-8.488-002	6.195-003	-4.907-001
2.10	-1.205-001	-2.598-001	-1.038-002	-1.155-002	4.310-003	1.229-001	1.484-002	-4.922-001	1.863-003	-8.752-002	6.037-003	-5.120-001
2.20	-1.286-001	-2.320-001	-9.398-003	-4.109-003	1.971-002	1.684-001	1.452-002	-5.140-001	1.810-003	-8.985-002	6.136-003	-5.326-001
2.30	-1.320-001	-2.008-001	-7.797-003	3.292-003	3.673-002	2.105-001	1.395-002	-5.351-001	1.776-003	-9.185-002	6.654-003	-5.525-001
2.40	-1.308-001	-1.679-001	-5.778-003	1.041-002	5.370-002	2.483-001	1.328-002	-5.552-001	1.786-003	-9.354-002	7.700-003	-5.718-001
2.50	-1.257-001	-1.346-001	-3.579-003	1.709-002	6.903-002	2.815-001	1.266-002	-5.745-001	1.859-003	-9.492-002	9.321-003	-5.906-001
2.60	-1.176-001	-1.018-001	-1.426-003	2.327-002	8.148-002	3.103-001	1.222-002	-5.930-001	2.006-003	-9.599-002	1.151-002	-6.091-001
2.70	-1.077-001	-6.976-002	4.950-004	2.897-002	9.024-002	3.350-001	1.206-002	-6.106-001	2.231-003	-9.677-002	1.422-002	-6.275-001
2.80	-9.678-002	-3.871-002	2.049-003	3.422-002	9.488-002	3.559-001	1.223-002	-6.275-001	2.531-003	-9.727-002	1.739-002	-6.457-001
2.90	-8.577-002	-8.405-003	3.152-003	3.907-002	9.532-002	3.735-001	1.279-002	-6.436-001	2.903-003	-9.749-002	2.095-002	-6.638-001
3.00	-7.524-002	2.150-002	3.765-003	4.360-002	9.172-002	3.880-001	1.375-002	-6.591-001	3.344-003	-9.743-002	2.483-002	-6.819-001
3.10	-6.565-002	5.145-002	3.882-003	4.786-002	8.438-002	3.995-001	1.516-002	-6.738-001	3.849-003	-9.708-002	2.897-002	-7.000-001
3.20	-5.727-002	8.198-002	3.522-003	5.189-002	7.372-002	4.079-001	1.704-002	-6.879-001	4.416-003	-9.646-002	3.332-002	-7.180-001
3.30	-5.026-002	1.137-001	2.728-003	5.574-002	6.027-002	4.131-001	1.947-002	-7.012-001	5.047-003	-9.554-002	3.782-002	-7.361-001
3.40	-4.464-002	1.472-001	1.561-003	5.945-002	4.457-002	4.150-001	2.252-002	-7.138-001	5.745-003	-9.434-002	4.244-002	-7.543-001
3.50	-4.029-002	1.834-001	1.034-004	6.306-002	2.725-002	4.131-001	2.633-002	-7.255-001	6.518-003	-9.284-002	4.713-002	-7.725-001
3.60	-3.689-002	2.231-001	-1.539-003	6.660-002	8.969-003	4.072-001	3.108-002	-7.365-001	7.377-003	-9.104-002	5.182-002	-7.908-001
3.70	-3.382-002	2.677-001	-3.227-003	7.015-002	-9.557-003	3.968-001	3.704-002	-7.466-001	8.341-003	-8.895-002	5.645-002	-8.094-001
3.80	-2.996-002	3.185-001	-4.766-003	7.375-002	-2.759-002	3.810-001	4.460-002	-7.559-001	9.437-003	-8.659-002	6.090-002	-8.282-001
3.90	-2.336-002	3.777-001	-5.886-003	7.747-002	-4.442-002	3.589-001	5.431-002	-7.646-001	1.070-002	-8.398-002	6.500-002	-8.475-001
4.00	-1.060-002	4.474-001	-6.188-003	8.133-002	-5.949-002	3.290-001	6.697-002	-7.730-001	1.217-002	-8.117-002	6.846-002	-8.673-001
4.50	4.922-001	8.463-001	2.845-002	8.153-002	-1.876-001	-2.336-002	1.907-001	-8.883-001	2.090-002	-7.056-002	4.855-002	-9.659-001
5.00	7.561-001	9.549-002	7.705-003	-5.287-003	-5.671-001	-1.727-001	7.202-002	-1.068+000	8.252-003	-4.809-002	4.470-002	-9.661-001

Table A12a
Impedance Coefficients
$T = 0.1 \quad H = 0.5$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	9.352-006	2.068-003	1.665-006	2.674-004	1.152-005	1.775-003	8.759-006	8.623-004	2.076-005	1.773-003	7.893-006	9.515-004
0.05	2.337-004	1.034-002	4.160-005	1.335-003	2.875-004	8.864-003	2.187-004	4.304-003	5.185-004	8.849-003	1.972-004	4.752-003
0.10	9.338-004	2.065-002	1.659-004	2.662-003	1.145-003	1.766-002	8.719-004	8.558-003	2.068-003	1.759-002	7.872-004	9.471-003
0.15	2.097-003	3.090-002	3.715-004	3.973-003	2.560-003	2.632-002	1.950-003	1.271-002	4.634-003	2.613-002	1.765-003	1.412-002
0.20	3.718-003	4.108-002	6.562-004	5.258-003	4.508-003	3.478-002	3.440-003	1.673-002	8.188-003	3.435-002	3.124-003	1.868-002
0.30	8.306-003	6.109-002	1.449-003	7.725-003	9.871-003	5.086-002	7.563-003	2.414-002	1.811-002	4.950-002	6.938-003	2.738-002
0.40	1.463-002	8.050-002	2.510-003	1.001-002	1.690-002	6.548-002	1.303-002	3.048-002	3.144-002	6.230-002	1.212-002	3.534-002
0.50	2.259-002	9.914-002	3.796-003	1.206-002	2.516-002	7.833-002	1.955-002	3.550-002	4.767-002	7.217-002	1.852-002	4.236-002
0.60	3.212-002	1.169-001	5.258-003	1.385-002	3.418-002	8.920-002	2.680-002	3.901-002	6.623-002	7.858-002	2.599-002	4.829-002
0.70	4.314-002	1.336-001	6.841-003	1.535-002	4.343-002	9.804-002	3.446-002	4.090-002	8.647-002	8.112-002	3.435-002	5.298-002
0.80	5.559-002	1.491-001	8.493-003	1.654-002	5.240-002	1.049-001	4.216-002	4.114-002	1.077-001	7.949-002	4.344-002	5.630-002
0.90	6.942-002	1.633-001	1.016-002	1.742-002	6.059-002	1.099-001	4.954-002	3.975-002	1.292-001	7.342-002	5.307-002	5.815-002
1.00	8.460-002	1.759-001	1.177-002	1.799-002	6.753-002	1.134-001	5.626-002	3.681-002	1.502-001	6.273-002	6.306-002	5.841-002
1.10	1.011-001	1.868-001	1.329-002	1.825-002	7.280-002	1.158-001	6.195-002	3.246-002	1.697-001	4.732-002	7.319-002	5.696-002
1.20	1.188-001	1.956-001	1.464-002	1.821-002	7.606-002	1.175-001	6.628-002	2.695-002	1.868-001	2.717-002	8.320-002	5.368-002
1.30	1.375-001	2.018-001	1.575-002	1.790-002	7.707-002	1.193-001	6.891-002	2.058-002	2.003-001	2.498-003	9.275-002	4.843-002
1.40	1.568-001	2.050-001	1.656-002	1.736-002	7.576-002	1.219-001	6.955-002	1.381-002	2.088-001	-2.619-002	1.014-001	4.117-002
1.50	1.762-001	2.047-001	1.698-002	1.667-002	7.234-002	1.262-001	6.800-002	7.234-003	2.107-001	-5.788-002	1.086-001	3.190-002
1.60	1.947-001	2.005-001	1.696-002	1.591-002	6.735-002	1.333-001	6.426-002	1.567-003	2.049-001	-9.088-002	1.137-001	2.087-002
1.70	2.111-001	1.922-001	1.646-002	1.524-002	6.180-002	1.438-001	5.859-002	-2.380-003	1.903-001	-1.228-001	1.160-001	8.583-003
1.80	2.238-001	1.804-001	1.550-002	1.480-002	5.709-002	1.581-001	5.162-002	-3.860-003	1.671-001	-1.505-001	1.150-001	-4.127-003
1.90	2.317-001	1.661-001	1.418-002	1.477-002	5.485-002	1.761-001	4.435-002	-2.400-003	1.367-001	-1.709-001	1.105-001	-1.613-002
2.00	2.338-001	1.512-001	1.265-002	1.526-002	5.652-002	1.966-001	3.796-002	2.003-003	1.021-001	-1.816-001	1.029-001	-2.623-002
2.10	2.301-001	1.378-001	1.111-002	1.629-002	6.297-002	2.180-001	3.355-002	8.800-003	6.713-002	-1.817-001	9.295-002	-3.342-002
2.20	2.216-001	1.276-001	9.764-003	1.782-002	7.417-002	2.385-001	3.183-002	1.701-002	3.554-002	-1.720-001	8.187-002	-3.720-002
2.30	2.098-001	1.219-001	8.740-003	1.971-002	8.933-002	2.565-001	3.300-002	2.552-002	1.023-002	-1.548-001	7.088-002	-3.761-002
2.40	1.963-001	1.211-001	8.100-003	2.182-002	1.072-001	2.710-001	3.677-002	3.333-002	-7.351-003	-1.333-001	6.093-002	-3.515-002
2.50	1.827-001	1.251-001	7.838-003	2.400-002	1.264-001	2.818-001	4.257-002	3.977-002	-1.710-002	-1.102-001	5.261-002	-3.052-002
2.60	1.700-001	1.333-001	7.903-003	2.614-002	1.458-001	2.890-001	4.974-002	4.449-002	-1.985-002	-8.781-002	4.615-002	-2.443-002
2.70	1.589-001	1.448-001	8.229-003	2.819-002	1.645-001	2.932-001	5.766-002	4.742-002	-1.682-002	-6.770-002	4.153-002	-1.750-002
2.80	1.497-001	1.592-001	8.750-003	3.011-002	1.821-001	2.950-001	6.587-002	4.866-002	-9.326-003	-5.070-002	3.859-002	-1.014-002
2.90	1.425-001	1.759-001	9.410-003	3.190-002	1.982-001	2.949-001	7.402-002	4.837-002	1.466-003	-3.721-002	3.713-002	-2.629-003
3.00	1.374-001	1.946-001	1.017-002	3.356-002	2.128-001	2.934-001	8.188-002	4.676-002	1.451-002	-2.735-002	3.696-002	4.886-003
3.10	1.342-001	2.151-001	1.099-002	3.511-002	2.259-001	2.910-001	8.931-002	4.401-002	2.940-002	-2.109-002	3.792-002	1.235-002
3.20	1.330-001	2.374-001	1.187-002	3.657-002	2.374-001	2.879-001	9.623-002	4.028-002	4.531-002	-1.836-002	3.992-002	1.978-002
3.30	1.340-001	2.616-001	1.280-002	3.795-002	2.476-001	2.845-001	1.026-001	3.567-002	6.196-002	-1.913-002	4.292-002	2.721-002
3.40	1.373-001	2.880-001	1.377-002	3.927-002	2.565-001	2.810-001	1.084-001	.027-002	7.907-002	-2.344-002	4.697-002	3.472-002
3.50	1.432-001	3.168-001	1.481-002	4.055-002	2.641-001	2.775-001	1.135-001	.411-002	9.645-002	-3.149-002	5.219-002	4.239-002
3.60	1.525-001	3.486-001	1.594-002	4.179-002	2.705-001	2.742-001	1.180-001	.720-002	1.139-001	-4.363-002	5.882-002	5.031-002
3.70	1.660-001	3.838-001	1.718-002	4.298-002	2.758-001	2.713-001	1.219-001	.498-003	1.310-001	-6.044-002	6.720-002	5.850-002
3.80	1.854-001	4.230-001	1.858-002	4.411-002	2.799-001	2.690-001	1.248-001	283-004	1.474-001	-8.282-002	7.789-002	6.696-002
3.90	2.129-001	4.667-001	2.020-002	4.513-002	2.829-001	2.677-001	1.267-001	620-003	1.622-001	-1.120-001	9.168-002	7.549-002
4.00	2.522-001	5.150-001	2.212-002	4.598-002	2.848-001	2.676-001	1.272-001	927-002	1.736-001	-1.498-001	1.097-001	8.358-002
4.50	8.479-001	5.824-001	3.456-002	3.810-002	3.046-001	3.146-001	7.454-002	60-002	-3.908-002	-4.642-001	2.954-001	9.649-003
5.00	6.822-001	-2.175-001	1.249-002	3.307-002	4.221-001	2.862-001	6.028-002	80-003	-3.398-001	-2.140-002	1.104-001	-2.166-001

Table A12b
Pressure Coefficients
$T = 0.1 \quad H = 0.5$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	6.170-011 -2.375-003	2.598-011 -1.000-003	6.819-011 -2.625-003	-1.206-011 -2.375-003	2.498-011 -1.000-003	-1.333-011 -2.625-003
0.05	3.843-008 -1.187-002	1.618-008 -4.997-003	4.245-008 -1.311-002	3.693-008 -1.187-002	1.560-008 -4.999-003	4.080-008 -1.312-002
0.10	6.082-007 -2.373-002	2.558-007 -9.975-003	6.709-007 -2.615-002	5.917-007 -2.374-002	2.489-007 -9.993-003	6.527-007 -2.624-002
0.15	3.023-006 -3.555-002	1.270-006 -1.492-002	3.327-006 -3.903-002	2.985-006 -3.559-002	1.254-006 -1.498-002	3.285-006 -3.934-002
0.20	9.310-006 -4.732-002	3.902-006 -1.980-002	1.021-005 -5.168-002	9.389-006 -4.742-002	3.935-006 -1.994-002	1.030-005 -5.243-002
0.30	4.366-005 -7.066-002	1.820-005 -2.934-002	4.742-005 -7.601-002	4.689-005 -7.100-002	1.954-005 -2.981-002	5.091-005 -7.851-002
0.40	1.231-004 -9.366-002	5.091-005 -3.845-002	1.320-004 -9.858-002	1.455-004 -9.442-002	6.014-005 -3.956-002	1.558-004 -1.045-001
0.50	2.558-004 -1.163-001	1.048-004 -4.703-002	2.699-004 -1.189-001	3.471-004 -1.176-001	1.420-004 -4.916-002	3.649-004 -1.302-001
0.60	4.227-004 -1.384-001	1.713-004 -5.497-002	4.386-004 -1.365-001	7.006-004 -1.407-001	2.829-004 -5.858-002	7.197-004 -1.559-001
0.70	5.599-004 -1.601-001	2.249-004 -6.220-002	5.743-004 -1.509-001	1.259-003 -1.635-001	5.003-004 -6.781-002	1.257-003 -1.813-001
0.80	5.420-004 -1.814-001	2.183-004 -6.864-002	5.665-004 -1.619-001	2.076-003 -1.861-001	8.099-004 -7.683-002	2.006-003 -2.067-001
0.90	1.653-004 -2.024-001	8.032-005 -7.421-002	2.613-004 -1.690-001	3.204-003 -2.084-001	1.224-003 -8.563-002	2.978-003 -2.319-001
1.00	-8.664-004 -2.229-001	-2.835-004 -7.883-002	-5.240-004 -1.719-001	4.690-003 -2.307-001	1.748-003 -9.422-002	4.166-003 -2.571-001
1.10	-2.951-003 -2.430-001	-9.862-004 -8.240-002	-1.970-003 -1.700-001	6.572-003 -2.529-001	2.382-003 -1.026-001	5.539-003 -2.822-001
1.20	-6.586-003 -2.625-001	-2.149-003 -8.477-002	-4.208-003 -1.631-001	8.868-003 -2.750-001	3.115-003 -1.108-001	7.034-003 -3.075-001
1.30	-1.235-002 -2.810-001	-3.880-003 -8.577-002	-7.247-003 -1.505-001	1.157-002 -2.973-001	3.924-003 -1.187-001	8.559-003 -3.327-001
1.40	-2.085-002 -2.979-001	-6.249-003 -8.515-002	-1.089-002 -1.316-001	1.463-002 -3.198-001	4.770-003 -1.265-001	9.988-003 -3.581-001
1.50	-3.259-002 -3.124-001	-9.239-003 -8.263-002	-1.462-002 -1.061-001	1.793-002 -3.427-001	5.598-003 -1.341-001	1.117-002 -3.834-001
1.60	-4.782-002 -3.232-001	-1.270-002 -7.790-002	-1.756-002 -7.370-002	2.128-002 -3.661-001	6.341-003 -1.414-001	1.197-002 -4.086-001
1.70	-6.628-002 -3.287-001	-1.631-002 -7.072-002	-1.849-002 -3.454-002	2.443-002 -3.900-001	6.924-003 -1.485-001	1.227-002 -4.335-001
1.80	-8.702-002 -3.275-001	-1.959-002 -6.098-002	-1.599-002 1.043-002	2.705-002 -4.143-001	7.283-003 -1.551-001	1.207-002 -4.577-001
1.90	-1.083-001 -3.184-001	-2.193-002 -4.885-002	-8.890-003 5.941-002	2.885-002 -4.388-001	7.392-003 -1.613-001	1.150-002 -4.809-001
2.00	-1.278-001 -3.012-001	-2.282-002 -3.483-002	3.293-003 1.099-001	2.963-002 -4.631-001	7.276-003 -1.667-001	1.086-002 -5.029-001
2.10	-1.435-001 -2.768-001	-2.195-002 -1.965-002	2.000-002 1.593-001	2.938-002 -4.868-001	7.017-003 -1.714-001	1.053-002 -5.236-001
2.20	-1.536-001 -2.470-001	-1.937-002 -4.160-003	3.967-002 2.050-001	2.827-002 -5.095-001	6.737-003 -1.753-001	1.092-002 -5.430-001
2.30	-1.576-001 -2.140-001	-1.544-002 1.090-002	6.012-002 2.457-001	2.662-002 -5.309-001	6.559-003 -1.782-001	1.232-002 -5.615-001
2.40	-1.559-001 -1.798-001	-1.074-002 2.503-002	7.915-002 2.809-001	2.479-002 -5.508-001	6.586-003 -1.803-001	1.489-002 -5.794-001
2.50	-1.497-001 -1.462-001	-5.863-003 3.800-002	9.497-002 3.106-001	2.310-002 -5.694-001	6.879-003 -1.817-001	1.862-002 -5.970-001
2.60	-1.402-001 -1.138-001	-1.329-003 4.980-002	1.064-001 3.357-001	2.179-002 -5.866-001	7.461-003 -1.823-001	2.341-002 -6.146-001
2.70	-1.288-001 -8.308-002	2.481-003 6.053-002	1.129-001 3.566-001	2.102-002 -6.027-001	8.331-003 -1.823-001	2.912-002 -6.323-001
2.80	-1.167-001 -5.383-002	5.325-003 7.036-002	1.143-001 3.740-001	2.089-002 -6.177-001	9.471-003 -1.816-001	3.557-002 -6.503-001
2.90	-1.046-001 -2.573-002	7.080-003 7.945-002	1.108-001 3.884-001	2.143-002 -6.317-001	1.086-002 -1.803-001	4.262-002 -6.686-001
3.00	-9.321-002 1.685-003	7.707-003 8.793-002	1.029-001 3.998-001	2.268-002 -6.448-001	1.247-002 -1.783-001	5.013-002 -6.873-001
3.10	-8.294-002 2.896-002	7.231-003 9.592-002	9.092-002 4.083-001	2.469-002 -6.569-001	1.431-002 -1.758-001	5.800-002 -7.063-001
3.20	-7.407-002 5.666-002	5.721-003 1.035-001	7.550-002 4.138-001	2.751-002 -6.681-001	1.635-002 -1.726-001	6.613-002 -7.258-001
3.30	-6.673-002 8.538-002	3.278-003 1.108-001	5.723-002 4.161-001	3.123-002 -6.783-001	1.861-002 -1.687-001	7.444-002 -7.457-001
3.40	-6.096-002 1.158-001	3.410-005 1.178-001	3.670-002 4.149-001	3.602-002 -6.874-001	2.111-002 -1.642-001	8.285-002 -7.660-001
3.50	-5.669-002 1.486-001	-3.848-003 1.246-001	1.457-002 4.099-001	4.210-002 -6.954-001	2.387-002 -1.590-001	9.128-002 -7.869-001
3.60	-5.367-002 1.848-001	-8.166-003 1.314-001	-8.527-003 4.006-001	4.981-002 -7.020-001	2.697-002 -1.531-001	9.961-002 -8.084-001
3.70	-5.144-002 2.255-001	-1.266-002 1.381-001	-3.190-002 3.867-001	5.963-002 -7.073-001	3.046-002 -1.465-001	1.077-001 -8.306-001
3.80	-4.915-002 2.722-001	-1.698-002 1.449-001	-5.490-002 3.673-001	7.231-002 -7.111-001	3.446-002 -1.392-001	1.154-001 -8.538-001
3.90	-4.524-002 3.267-001	-2.064-002 1.521-001	-7.688-002 3.417-001	8.889-002 -7.137-001	3.913-002 -1.314-001	1.223-001 -8.780-001
4.00	-3.697-002 3.915-001	-2.293-002 1.596-001	-9.741-002 3.086-001	1.109-001 -7.156-001	4.466-002 -1.233-001	1.280-001 -9.036-001
4.50	3.889-001 8.265-001	3.643-002 1.726-001	-2.430-001 -3.397-002	3.599-001 -8.467-001	8.420-002 -1.012-001	8.997-002 -1.035+000
5.00	7.675-001 1.264-001	1.692-002 -6.693-003	-5.844-001 -1.825-001	1.563-001 -1.211+000	3.555-002 -6.352-002	8.561-002 -9.953-001

Table A13a
Impedance Coefficients
$T = 0.2 \quad H = 0.5$

ω	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	7.214-006	1.706-003	5.714-006	8.327-004	1.081-005	1.614-003	1.572-005	1.432-003	1.766-005	1.391-003	1.284-005	1.493-003
0.05	1.803-004	8.528-003	1.427-004	4.159-003	2.698-004	8.059-003	3.925-004	7.143-003	4.411-004	6.939-003	3.208-004	7.454-003
0.10	7.203-004	1.704-002	5.690-004	8.287-003	1.074-003	1.605-002	1.564-003	1.419-002	1.759-003	1.378-002	1.280-003	1.485-002
0.15	1.618-003	2.551-002	1.273-003	1.236-002	2.398-003	2.390-002	3.495-003	2.105-002	3.939-003	2.044-002	2.870-003	2.215-002
0.20	2.868-003	3.393-002	2.247-003	1.634-002	4.216-003	3.156-002	6.156-003	2.764-002	6.955-003	2.683-002	5.077-003	2.928-002
0.30	6.409-003	5.054-002	4.950-003	2.393-002	9.194-003	4.604-002	1.349-002	3.967-002	1.535-002	3.843-002	1.126-002	4.288-002
0.40	1.129-002	6.677-002	8.551-003	3.089-002	1.565-002	5.910-002	2.314-002	4.971-002	2.658-002	4.798-002	1.965-002	5.529-002
0.50	1.747-002	8.250-002	1.289-002	3.705-002	2.314-002	7.047-002	3.454-002	5.731-002	4.019-002	5.495-002	3.001-002	6.623-002
0.60	2.490-002	9.769-002	1.780-002	4.232-002	3.119-002	8.000-002	4.710-002	6.220-002	5.567-002	5.895-002	4.209-002	7.545-002
0.70	3.357-002	1.123-001	2.309-002	4.662-002	3.928-002	8.767-002	6.018-002	6.422-002	7.248-002	5.963-002	5.566-002	8.277-002
0.80	4.351-002	1.261-001	2.859-002	4.992-002	4.694-002	9.361-002	7.316-002	6.335-002	9.005-002	5.673-002	7.050-002	8.801-002
0.90	5.478-002	1.393-001	3.413-002	5.219-002	5.371-002	9.801-002	8.542-002	5.967-002	1.078-001	5.001-002	8.640-002	9.097-002
1.00	6.747-002	1.514-001	3.954-002	5.343-002	5.921-002	1.012-001	9.636-002	5.336-002	1.251-001	3.925-002	1.032-001	9.144-002
1.10	8.172-002	1.625-001	4.464-002	5.364-002	6.308-002	1.036-001	1.054-001	4.468-002	1.411-001	2.426-002	1.205-001	8.914-002
1.20	9.762-002	1.719-001	4.923-002	5.284-002	6.505-002	1.058-001	1.118-001	3.404-002	1.549-001	4.909-003	1.382-001	8.371-002
1.30	1.152-001	1.794-001	5.306-002	5.106-002	6.497-002	1.083-001	1.151-001	2.202-002	1.654-001	-1.879-002	1.556-001	7.471-002
1.40	1.344-001	1.840-001	5.587-002	4.843-002	6.288-002	1.121-001	1.147-001	9.478-003	1.710-001	-4.649-002	1.720-001	6.173-002
1.50	1.546-001	1.850-001	5.734-002	4.513-002	5.912-002	1.180-001	1.102-001	-2.428-003	1.700-001	-7.725-002	1.863-001	4.449-002
1.60	1.750-001	1.815-001	5.715-002	4.153-002	5.448-002	1.270-001	1.015-001	-1.218-002	1.607-001	-1.092-001	1.969-001	2.312-002
1.70	1.940-001	1.729-001	5.512-002	3.819-002	5.022-002	1.396-001	8.940-002	-1.808-002	1.420-001	-1.396-001	2.022-001	-1.545-003
1.80	2.096-001	1.594-001	5.129-002	3.579-002	4.803-002	1.559-001	7.544-002	-1.863-002	1.141-001	-1.645-001	2.005-001	-2.770-002
1.90	2.197-001	1.422-001	4.606-002	3.505-002	4.960-002	1.749-001	6.199-002	-1.312-002	7.933-002	-1.804-001	1.912-001	-5.268-002
2.00	2.231-001	1.237-001	4.016-002	3.641-002	5.604-002	1.949-001	5.168-002	-2.174-003	4.160-002	-1.847-001	1.751-001	-7.357-002
2.10	2.197-001	1.065-001	3.449-002	3.991-002	6.740-002	2.138-001	4.651-002	1.236-002	5.815-003	-1.774-001	1.544-001	-8.811-002
2.20	2.109-001	9.300-002	2.978-002	4.518-002	8.268-002	2.297-001	4.722-002	2.795-002	-2.392-002	-1.607-001	1.318-001	-9.547-002
2.30	1.986-001	8.438-002	2.646-002	5.158-002	1.003-001	2.417-001	5.331-002	4.229-002	-4.536-002	-1.383-001	1.101-001	-9.619-002
2.40	1.848-001	8.090-002	2.460-002	5.849-002	1.186-001	2.498-001	6.345-002	5.384-002	-5.818-002	-1.137-001	9.103-002	-9.169-002
2.50	1.711-001	8.204-002	2.402-002	6.542-002	1.364-001	2.543-001	7.614-002	6.189-002	-6.340-002	-8.982-002	7.533-002	-8.363-002
2.60	1.585-001	8.698-002	2.447-002	7.209-002	1.530-001	2.562-001	9.005-002	6.642-002	-6.260-002	-6.827-002	6.314-002	-7.342-002
2.70	1.474-001	9.491-002	2.567-002	7.836-002	1.679-001	2.561-001	1.042-001	6.775-002	-5.740-002	-4.997-002	5.417-002	-6.211-002
2.80	1.380-001	1.051-001	2.740-002	8.420-002	1.811-001	2.546-001	1.180-001	6.633-002	-4.915-002	-3.519-002	4.797-002	-5.037-002
2.90	1.304-001	1.172-001	2.949-002	8.965-002	1.927-001	2.524-001	1.310-001	6.263-002	-3.893-002	-2.389-002	4.408-002	-3.856-002
3.00	1.243-001	1.307-001	3.184-002	9.475-002	2.028-001	2.498-001	1.430-001	5.705-002	-2.750-002	-1.585-002	4.212-002	-2.683-002
3.10	1.198-001	1.456-001	3.437-002	9.960-002	2.116-001	2.471-001	1.539-001	4.991-002	-1.540-002	-1.086-002	4.182-002	-1.520-002
3.20	1.167-001	1.618-001	3.706-002	1.042-001	2.193-001	2.444-001	1.638-001	4.146-002	-2.993-003	-8.694-003	4.300-002	-3.613-003
3.30	1.151-001	1.793-001	3.993-002	1.087-001	2.259-001	2.420-001	1.725-001	3.185-002	9.444-003	-9.222-003	4.562-002	8.050-003
3.40	1.149-001	1.984-001	4.299-002	1.132-001	2.318-001	2.399-001	1.801-001	2.121-002	2.171-002	-1.238-002	4.971-002	1.993-002
3.50	1.164-001	2.192-001	4.631-002	1.175-001	2.368-001	2.382-001	1.865-001	9.577-003	3.364-002	-1.822-002	5.544-002	3.218-002
3.60	1.199-001	2.420-001	4.997-002	1.218-001	2.413-001	2.370-001	1.917-001	-3.032-003	3.501-002	-2.687-002	6.313-002	3.393-002
3.70	1.258-001	2.673-001	5.407-002	1.261-001	2.453-001	2.365-001	1.956-001	-1.664-002	5.555-002	-3.859-002	7.326-002	5.832-002
3.80	1.351-001	2.955-001	5.875-002	1.302-001	2.489-001	2.367-001	1.978-001	-3.128-002	6.484-002	-5.380-002	8.652-002	7.236-002
3.90	1.488-001	3.269-001	6.420-002	1.341-001	2.522-001	2.377-001	1.982-001	-4.700-002	7.221-002	-7.301-002	1.039-001	8.691-002
4.00	1.689-001	3.621-001	7.063-002	1.376-001	2.554-001	2.398-001	1.962-001	-6.380-002	7.657-002	-9.688-002	1.269-001	1.015-001
4.50	5.005-001	5.169-001	1.185-001	1.242-001	2.896-001	2.710-001	1.160-001	-1.382-001	-5.251-002	-2.744-001	3.885-001	7.003-002
5.00	7.045-001	-4.713-002	6.101-002	7.757-002	3.731-001	2.381-001	7.784-002	-2.816-002	-2.981-001	1.505-002	2.688-001	-3.949-001

Table A13b
Pressure Coefficients
$T = 0.2 \quad H = 0.5$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	1.133-010 -2.250-003	1.007-010 -2.000-003	1.385-010 -2.750-003	4.487-011 -2.250-003	1.000-010 -2.000-003	5.484-011 -2.750-003
0.05	7.061-008 -1.125-002	6.274-008 -9.993-003	8.625-008 -1.373-002	7.014-008 -1.125-002	6.244-008 -9.997-003	8.568-008 -1.375-002
0.10	1.120-006 -2.248-002	9.944-007 -1.995-002	1.366-006 -2.738-002	1.122-006 -2.248-002	9.957-007 -1.998-002	1.368-006 -2.748-002
0.15	5.591-006 -3.369-002	4.954-006 -2.982-002	6.797-006 -4.084-002	5.657-006 -3.370-002	5.013-006 -2.993-002	6.877-006 -4.120-002
0.20	1.732-005 -4.486-002	1.531-005 -3.957-002	2.097-005 -5.402-002	1.779-005 -4.488-002	1.572-005 -3.984-002	2.153-005 -5.488-002
0.30	8.273-005 -6.704-002	7.263-005 -5.857-002	9.896-005 -7.923-002	8.874-005 -6.710-002	7.789-005 -5.945-002	1.061-004 -8.211-002
0.40	2.404-004 -8.897-002	2.090-004 -7.668-002	2.829-004 -1.024-001	2.750-004 -8.908-002	2.390-004 -7.874-002	3.233-004 -1.091-001
0.50	5.240-004 -1.107-001	4.501-004 -9.367-002	6.039-004 -1.229-001	6.555-004 -1.108-001	5.625-004 -9.760-002	7.534-004 -1.359-001
0.60	9.358-004 -1.321-001	7.925-004 -1.094-001	1.053-003 -1.402-001	1.323-003 -1.321-001	1.117-003 -1.160-001	1.478-003 -1.624-001
0.70	1.423-003 -1.535-001	1.187-003 -1.237-001	1.561-003 -1.540-001	2.377-003 -1.532-001	1.970-003 -1.339-001	2.566-003 -1.888-001
0.80	1.854-003 -1.749-001	1.524-003 -1.364-001	1.992-003 -1.639-001	3.926-003 -1.739-001	3.181-003 -1.513-001	4.068-003 -2.150-001
0.90	1.993-003 -1.964-001	1.626-003 -1.475-001	2.144-003 -1.694-001	6.079-003 -1.944-001	4.797-003 -1.681-001	6.001-003 -2.412-001
1.00	1.471-003 -2.182-001	1.248-003 -1.568-001	1.773-003 -1.701-001	8.942-003 -2.147-001	6.848-003 -1.845-001	8.341-003 -2.675-001
1.10	-2.362-004 -2.404-001	8.107-005 -1.642-001	6.313-004 -1.656-001	1.261-002 -2.351-001	9.334-003 -2.005-001	1.101-002 -2.940-001
1.20	-3.831-003 -2.629-001	-2.224-003 -1.692-001	-1.460-003 -1.554-001	1.717-002 -2.556-001	1.222-002 -2.162-001	1.388-002 -3.209-001
1.30	-1.019-002 -2.854-001	-6.009-003 -1.716-001	-4.508-003 -1.387-001	2.263-002 -2.765-001	1.542-002 -2.316-001	1.672-002 -3.481-001
1.40	-2.030-002 -3.072-001	-1.152-002 -1.707-001	-8.208-003 -1.148-001	2.893-002 -2.982-001	1.878-002 -2.468-001	1.926-002 -3.756-001
1.50	-3.513-002 -3.271-001	-1.880-002 -1.657-001	-1.178-002 -8.326-002	3.585-002 -3.211-001	2.205-002 -2.618-001	2.117-002 -4.034-001
1.60	-5.527-002 -3.433-001	-2.746-002 -1.557-001	-1.388-002 -4.367-002	4.298-002 -3.455-001	2.493-002 -2.766-001	2.212-002 -4.310-001
1.70	-8.051-002 -3.533-001	-3.657-002 -1.399-001	-1.263-002 3.401-003	4.963-002 -3.715-001	2.705-002 -2.910-001	2.191-002 -4.580-001
1.80	-1.093-001 -3.545-001	-4.467-002 -1.179-001	-6.062-003 5.622-002	5.497-002 -3.991-001	2.811-002 -3.045-001	2.065-002 -4.836-001
1.90	-1.389-001 -3.454-001	-4.999-002 -9.048-002	7.125-003 1.117-001	5.818-002 -4.277-001	2.801-002 -3.166-001	1.883-002 -5.071-001
2.00	-1.654-001 -3.256-001	-5.110-002 -5.912-002	2.675-002 1.661-001	5.880-002 -4.562-001	2.696-002 -3.266-001	1.732-002 -5.281-001
2.10	-1.854-001 -2.971-001	-4.752-002 -2.612-002	5.089-002 2.159-001	5.690-002 -4.836-001	2.541-002 -3.340-001	1.710-002 -5.468-001
2.20	-1.972-001 -2.632-001	-3.987-002 6.277-003	7.639-002 2.587-001	5.308-002 -5.089-001	2.397-002 -3.387-001	1.897-002 -5.638-001
2.30	-2.005-001 -2.272-001	-2.960-002 3.649-002	9.996-002 2.941-001	4.823-002 -5.317-001	2.317-002 -3.409-001	2.330-002 -5.798-001
2.40	-1.967-001 -1.919-001	-1.840-002 6.379-002	1.191-001 3.226-001	4.318-002 -5.518-001	2.333-002 -3.407-001	3.006-002 -5.957-001
2.50	-1.878-001 -1.587-001	-7.733-003 8.814-002	1.322-001 3.455-001	3.856-002 -5.695-001	2.460-002 -3.385-001	3.894-002 -6.120-001
2.60	-1.757-001 -1.284-001	1.346-003 1.099-001	1.388-001 3.641-001	3.477-002 -5.852-001	2.695-002 -3.346-001	4.954-002 -6.292-001
2.70	-1.620-001 -1.008-001	8.215-003 1.296-001	1.391-001 3.791-001	3.198-002 -5.992-001	3.032-002 -3.290-001	6.148-002 -6.475-001
2.80	-1.479-001 -7.533-002	1.258-002 1.477-001	1.334-001 3.912-001	3.027-002 -6.117-001	3.460-002 -3.220-001	7.442-002 -6.669-001
2.90	-1.343-001 -5.153-002	1.436-002 1.645-001	1.224-001 4.006-001	2.965-002 -6.229-001	3.970-002 -3.135-001	8.808-002 -6.875-001
3.00	-1.216-001 -2.873-002	1.362-002 1.803-001	1.068-001 4.072-001	3.012-002 -6.328-001	4.557-002 -3.034-001	1.022-001 -7.091-001
3.10	-1.102-001 -6.345-003	1.051-002 1.954-001	8.738-002 4.108-001	3.172-002 -6.414-001	5.218-002 -2.917-001	1.168-001 -7.320-001
3.20	-1.004-001 1.621-002	5.248-003 2.098-001	6.473-002 4.112-001	3.452-002 -6.487-001	5.956-002 -2.784-001	1.315-001 -7.560-001
3.30	-9.214-002 3.949-002	-1.924-003 2.237-001	3.956-002 4.081-001	3.867-002 -6.544-001	6.775-002 -2.633-001	1.462-001 -7.812-001
3.40	-8.554-002 6.408-002	-1.072-002 2.371-001	1.251-002 4.010-001	4.441-002 -6.585-001	7.687-002 -2.465-001	1.608-001 -8.077-001
3.50	-8.053-002 9.059-002	-2.080-002 2.500-001	-1.576-002 3.896-001	5.210-002 -6.607-001	8.708-002 -2.277-001	1.752-001 -8.356-001
3.60	-7.697-002 1.197-001	-3.177-002 2.627-001	-4.465-002 3.735-001	6.229-002 -6.608-001	9.863-002 -2.071-001	1.890-001 -8.650-001
3.70	-7.457-002 1.524-001	-4.317-002 2.752-001	-7.354-002 3.523-001	7.575-002 -6.586-001	1.118-001 -1.846-001	2.020-001 -8.960-001
3.80	-7.281-002 1.896-001	-5.437-002 2.876-001	-1.019-001 3.256-001	9.359-002 -6.540-001	1.271-001 -1.604-001	2.137-001 -9.290-001
3.90	-7.080-002 2.327-001	-6.460-002 3.003-001	-1.292-001 2.928-001	1.174-001 -6.469-001	1.451-001 -1.346-001	2.236-001 -9.640-001
4.00	-6.697-002 2.833-001	-7.275-002 3.134-001	-1.552-001 2.533-001	1.495-001 -6.380-001	1.664-001 -1.080-001	2.307-001 -1.001+000
4.50	1.603-001 6.757-001	-7.070-003 3.566-001	-3.004-001 -7.129-002	5.523-001 -7.132-001	3.368-001 -3.500-002	1.641-001 -1.189+000
5.00	7.479-001 3.137-001	6.215-002 2.494-002	-5.663-001 -2.690-001	4.456-001 -1.511+000	2.026-001 -5.767-002	1.287-001 -1.091+000

Table A14a
Impedance Coefficients
$T = 0.3 \quad H = 0.5$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	5.655-006	1.429-003	1.125-005	1.537-003	1.032-005	1.493-003	2.155-005	1.843-003	1.528-005	1.126-003	1.596-005	1.804-003
0.05	1.413-004	7.142-003	2.810-004	7.673-003	2.575-004	7.455-003	5.380-004	9.191-003	3.816-004	5.617-003	3.986-004	9.010-003
0.10	5.646-004	1.427-002	1.120-003	1.529-002	1.025-003	1.484-002	2.142-003	1.825-002	1.521-003	1.115-002	1.590-003	1.795-002
0.15	1.268-003	2.137-002	2.505-003	2.278-002	2.285-003	2.209-002	4.785-003	2.703-002	3.404-003	1.651-002	3.564-003	2.676-002
0.20	2.248-003	2.844-002	4.417-003	3.009-002	4.011-003	2.914-002	8.418-003	3.543-002	6.006-003	2.163-002	6.302-003	3.537-002
0.30	5.023-003	4.243-002	9.709-003	4.398-002	8.712-003	4.242-002	1.839-002	5.058-002	1.323-002	3.081-002	1.397-002	5.175-002
0.40	8.853-003	5.616-002	1.673-002	5.658-002	1.475-002	5.429-002	3.141-002	6.291-002	2.285-002	3.816-002	2.434-002	6.669-002
0.50	1.371-002	6.960-002	2.514-002	6.763-002	2.167-002	6.453-002	4.667-002	7.185-002	3.445-002	4.324-002	3.712-002	7.984-002
0.60	1.958-002	8.272-002	3.460-002	7.694-002	2.898-002	7.304-002	6.330-002	7.707-002	4.757-002	4.570-002	5.204-002	9.095-002
0.70	2.649-002	9.551-002	4.476-002	8.441-002	3.620-002	7.984-002	8.042-002	7.840-002	6.176-002	4.527-002	6.884-002	9.982-002
0.80	3.450-002	1.079-001	5.530-002	8.997-002	4.288-002	8.509-002	9.720-002	7.589-002	7.653-002	4.173-002	8.730-002	1.063-001
0.90	4.375-002	1.200-001	6.592-002	9.362-002	4.861-002	8.905-002	1.128-001	6.969-002	9.139-002	3.484-002	1.073-001	1.100-001
1.00	5.440-002	1.315-001	7.631-002	9.532-002	5.305-002	9.207-002	1.265-001	6.007-002	1.058-001	2.438-002	1.286-001	1.109-001
1.10	6.668-002	1.424-001	8.618-002	9.506-002	5.592-002	9.457-002	1.374-001	4.740-002	1.190-001	1.011-002	1.512-001	1.083-001
1.20	8.086-002	1.522-001	9.516-002	9.282-002	5.701-002	9.712-002	1.447-001	3.226-002	1.303-001	-8.203-003	1.746-001	1.016-001
1.30	9.712-002	1.603-001	1.028-001	8.861-002	5.627-002	1.004-001	1.475-001	1.546-002	1.383-001	-3.063-002	1.985-001	9.020-002
1.40	1.155-001	1.660-001	1.084-001	8.257-002	5.385-002	1.052-001	1.451-001	-1.791-003	1.415-001	-5.690-002	2.217-001	7.303-002
1.50	1.358-001	1.681-001	1.114-001	7.503-002	5.024-002	1.124-001	1.369-001	-1.772-002	1.380-001	-8.608-002	2.426-001	4.934-002
1.60	1.570-001	1.654-001	1.109-001	6.673-002	4.642-002	1.227-001	1.230-001	-3.000-002	1.260-001	-1.162-001	2.587-001	1.895-002
1.70	1.774-001	1.570-001	1.065-001	5.890-002	4.388-002	1.366-001	1.046-001	-3.604-002	1.043-001	-1.438-001	2.670-001	-1.710-002
1.80	1.946-001	1.428-001	9.812-002	5.317-002	4.442-002	1.536-001	8.467-002	-3.374-002	7.345-002	-1.649-001	2.648-001	-5.598-002
1.90	2.060-001	1.242-001	8.683-002	5.118-002	4.951-002	1.721-001	6.704-002	-2.265-002	3.656-002	-1.753-001	2.508-001	-9.319-002
2.00	2.101-001	1.038-001	7.441-002	5.387-002	5.962-002	1.900-001	5.566-002	-4.570-003	-1.349-003	-1.732-001	2.264-001	-1.239-001
2.10	2.070-001	8.491-002	6.290-002	6.108-002	7.392-002	2.051-001	5.282-002	1.684-002	-3.495-002	-1.597-001	1.956-001	-1.447-001
2.20	1.983-001	6.990-002	5.380-002	7.174-002	9.069-002	2.161-001	5.851-002	3.759-002	-6.056-002	-1.382-001	1.628-001	-1.549-001
2.30	1.863-001	5.993-002	4.777-002	8.435-002	1.081-001	2.229-001	7.095-002	5.468-002	-7.699-002	-1.131-001	1.320-001	-1.558-001
2.40	1.732-001	5.494-002	4.469-002	9.765-002	1.246-001	2.262-001	8.768-002	6.666-002	-8.498-002	-8.785-002	1.054-001	-1.499-001
2.50	1.603-001	5.420-002	4.407-002	1.108-001	1.396-001	2.268-001	1.065-001	7.332-002	-8.627-002	-6.469-002	8.362-002	-1.397-001
2.60	1.485-001	5.680-002	4.530-002	1.232-001	1.527-001	2.257-001	1.257-001	7.515-002	-8.272-002	-4.476-002	6.657-002	-1.270-001
2.70	1.381-001	6.191-002	4.786-002	1.349-001	1.638-001	2.237-001	1.443-001	7.292-002	-7.592-002	-2.838-002	5.361-002	-1.133-001
2.80	1.292-001	6.888-002	5.135-002	1.459-001	1.733-001	2.211-001	1.616-001	6.737-002	-6.711-002	-1.547-002	4.406-002	-9.911-002
2.90	1.217-001	7.726-002	5.550-002	1.562-001	1.813-001	2.186-001	1.775-001	5.917-002	-5.712-002	-5.737-003	3.727-002	-8.497-002
3.00	1.155-001	8.677-002	6.017-002	1.660-001	1.881-001	2.161-001	1.917-001	4.860-002	-4.656-002	1.131-003	3.276-002	-7.096-002
3.10	1.104-001	9.725-002	6.527-002	1.754-001	1.939-001	2.140-001	2.042-001	3.666-002	-3.580-002	5.429-003	3.018-002	-5.706-002
3.20	1.064-001	1.086-001	7.081-002	1.845-001	1.989-001	2.124-001	2.151-001	2.301-002	-2.513-002	7.390-003	2.931-002	-4.319-002
3.30	1.034-001	1.210-001	7.683-002	1.935-001	2.032-001	2.113-001	2.242-001	8.021-003	-1.473-002	7.179-003	3.009-002	-2.920-002
3.40	1.013-001	1.343-001	8.342-002	2.023-001	2.071-001	2.107-001	2.316-001	-8.180-003	-4.765-003	4.891-003	3.257-002	-1.492-002
3.50	1.003-001	1.488-001	9.070-002	2.110-001	2.106-001	2.108-001	2.372-001	-2.552-002	4.597-003	5.501-004	3.693-002	-1.662-004
3.60	1.004-001	1.647-001	9.886-002	2.197-001	2.139-001	2.115-001	2.408-001	-4.392-002	1.316-002	-5.876-003	4.349-002	1.513-002
3.70	1.018-001	1.822-001	1.081-001	2.281-001	2.172-001	2.129-001	2.421-001	-6.330-002	2.066-002	-1.447-002	5.272-002	3.107-002
3.80	1.051-001	2.014-001	1.187-001	2.361-001	2.206-001	2.151-001	2.409-001	-8.354-002	2.672-002	-2.536-002	6.532-002	4.761-002
3.90	1.106-001	2.228-001	1.308-001	2.435-001	2.244-001	2.180-001	2.368-001	-1.044-001	3.082-002	-3.868-002	8.218-002	6.454-002
4.00	1.193-001	2.465-001	1.447-001	2.497-001	2.287-001	2.217-001	2.291-001	-1.257-001	3.221-002	-5.450-002	1.045-001	8.132-002
4.50	2.666-001	3.836-001	2.369-001	2.303-001	2.705-001	2.446-001	1.207-001	-1.991-001	-4.796-002	-1.511-001	3.434-001	8.772-002
5.00	5.924-001	2.175-001	1.844-001	1.142-001	3.352-001	2.149-001	5.314-002	-7.813-002	-2.399-001	-3.222-003	4.508-001	-3.930-001

Table A14b
Pressure Coefficients
$T = 0.3 \quad H = 0.5$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	1.586-010 -2.125-003	2.239-010 -3.000-003	2.145-010 -2.875-003	9.555-011 -2.125-003	2.251-010 -3.000-003	1.293-010 -2.875-003
0.05	9.886-008 -1.062-002	1.395-007 -1.499-002	1.337-007 -1.436-002	9.945-008 -1.062-002	1.405-007 -1.499-002	1.345-007 -1.437-002
0.10	1.569-006 -2.123-002	2.212-006 -2.991-002	2.117-006 -2.861-002	1.589-006 -2.123-002	2.240-006 -2.996-002	2.144-006 -2.873-002
0.15	7.843-006 -3.182-002	1.103-005 -4.470-002	1.054-005 -4.264-002	8.012-006 -3.181-002	1.127-005 -4.487-002	1.077-005 -4.305-002
0.20	2.434-005 -4.238-002	3.414-005 -5.930-002	3.256-005 -5.636-002	2.518-005 -4.234-002	3.532-005 -5.968-002	3.368-005 -5.733-002
0.30	1.169-004 -6.338-002	1.627-004 -8.770-002	1.542-004 -8.244-002	1.255-004 -6.323-002	1.746-004 -8.896-002	1.655-004 -8.571-002
0.40	3.428-004 -8.421-002	4.718-004 -1.147-001	4.436-004 -1.061-001	3.884-004 -8.379-002	5.344-004 -1.176-001	5.022-004 -1.138-001
0.50	7.578-004 -1.049-001	1.028-003 -1.399-001	9.569-004 -1.268-001	9.249-004 -1.040-001	1.254-003 -1.455-001	1.165-003 -1.416-001
0.60	1.384-003 -1.256-001	1.846-003 -1.632-001	1.697-003 -1.439-001	1.865-003 -1.238-001	2.482-003 -1.725-001	2.272-003 -1.691-001
0.70	2.180-003 -1.464-001	2.853-003 -1.844-001	2.588-003 -1.570-001	3.353-003 -1.431-001	4.364-003 -1.986-001	3.924-003 -1.964-001
0.80	3.014-003 -1.676-001	3.867-003 -2.033-001	3.466-003 -1.657-001	5.545-003 -1.621-001	7.031-003 -2.238-001	6.185-003 -2.236-001
0.90	3.630-003 -1.893-001	4.578-003 -2.198-001	4.085-003 -1.695-001	8.607-003 -1.808-001	1.059-002 -2.482-001	9.069-003 -2.510-001
1.00	3.609-003 -2.119-001	4.544-003 -2.338-001	4.145-003 -1.681-001	1.271-002 -1.993-001	1.510-002 -2.718-001	1.253-002 -2.786-001
1.10	2.331-003 -2.355-001	3.195-003 -2.450-001	3.344-003 -1.609-001	1.804-002 -2.179-001	2.059-002 -2.949-001	1.643-002 -3.066-001
1.20	-1.074-003 -2.602-001	-1.302-004 -2.530-001	1.476-003 -1.474-001	2.474-002 -2.368-001	2.700-002 -3.176-001	2.054-002 -3.353-001
1.30	-7.745-003 -2.858-001	-6.110-003 -2.571-001	-1.438-003 -1.267-001	3.292-002 -2.565-001	3.413-002 -3.402-001	2.453-002 -3.646-001
1.40	-1.904-002 -3.115-001	-1.528-002 -2.561-001	-4.953-003 -9.798-002	4.252-002 -2.775-001	4.164-002 -3.628-001	2.791-002 -3.947-001
1.50	-3.636-002 -3.359-001	-2.777-002 -2.485-001	-7.985-003 -6.065-002	5.324-002 -3.005-001	4.896-002 -3.858-001	3.014-002 -4.251-001
1.60	-6.067-002 -3.564-001	-4.289-002 -2.326-001	-8.679-003 -1.454-002	6.439-002 -3.263-001	5.529-002 -4.088-001	3.071-002 -4.553-001
1.70	-9.174-002 -3.699-001	-5.882-002 -2.068-001	-4.580-003 3.929-002	7.476-002 -3.553-001	5.971-002 -4.316-001	2.941-002 -4.843-001
1.80	-1.275-001 -3.726-001	-7.256-002 -1.705-001	6.631-003 9.806-002	8.280-002 -3.873-001	6.146-002 -4.529-001	2.659-002 -5.108-001
1.90	-1.636-001 -3.625-001	-8.072-002 -1.253-001	2.593-002 1.574-001	8.702-002 -4.211-001	6.036-002 -4.713-001	2.338-002 -5.338-001
2.00	-1.950-001 -3.398-001	-8.089-002 -7.441-002	5.195-002 2.124-001	8.670-002 -4.550-001	5.708-002 -4.852-001	2.142-002 -5.531-001
2.10	-2.174-001 -3.077-001	-7.280-002 -2.238-002	8.111-002 2.594-001	8.219-002 -4.869-001	5.296-002 -4.937-001	2.231-002 -5.693-001
2.20	-2.292-001 -2.709-001	-5.838-002 2.706-002	1.090-001 2.971-001	7.474-002 -5.155-001	4.950-002 -4.967-001	2.697-002 -5.838-001
2.30	-2.311-001 -2.335-001	-4.067-002 7.179-002	1.320-001 3.262-001	6.591-002 -5.401-001	4.780-002 -4.946-001	3.555-002 -5.981-001
2.40	-2.253-001 -1.985-001	-2.265-002 1.113-001	1.479-001 3.484-001	5.697-002 -5.611-001	4.845-002 -4.884-001	4.757-002 -6.132-001
2.50	-2.145-001 -1.670-001	-6.550-003 1.462-001	1.560-001 3.655-001	4.878-002 -5.789-001	5.157-002 -4.786-001	6.233-002 -6.300-001
2.60	-2.007-001 -1.393-001	6.268-003 1.773-001	1.565-001 3.788-001	4.175-002 -5.942-001	5.702-002 -4.658-001	7.913-002 -6.486-001
2.70	-1.858-001 -1.148-001	1.514-002 2.056-001	1.502-001 3.890-001	3.604-002 -6.075-001	6.460-002 -4.502-001	9.739-002 -6.694-001
2.80	-1.708-001 -9.294-002	1.985-002 2.319-001	1.378-001 3.966-001	3.165-002 -6.190-001	7.410-002 -4.320-001	1.166-001 -6.922-001
2.90	-1.564-001 -7.294-002	2.048-002 2.566-001	1.203-001 4.013-001	2.853-002 -6.289-001	8.539-002 -4.109-001	1.365-001 -7.170-001
3.00	-1.431-001 -5.413-002	1.726-002 2.802-001	9.857-002 4.030-001	2.665-002 -6.373-001	9.843-002 -3.870-001	1.568-001 -7.439-001
3.10	-1.311-001 -3.589-002	1.053-002 3.028-001	7.344-002 4.014-001	2.603-002 -6.441-001	1.133-001 -3.601-001	1.772-001 -7.728-001
3.20	-1.206-001 -1.768-002	6.614-004 3.246-001	4.565-002 3.959-001	2.676-002 -6.493-001	1.300-001 -3.300-001	1.975-001 -8.037-001
3.30	-1.117-001 1.010-003	-1.191-002 3.457-001	1.592-002 3.863-001	2.901-002 -6.526-001	1.490-001 -2.966-001	2.175-001 -8.368-001
3.40	-1.042-001 2.067-002	-2.670-002 3.661-001	-1.510-002 3.721-001	3.310-002 -6.537-001	1.705-001 -2.598-001	2.367-001 -8.722-001
3.50	-9.828-002 4.179-002	-4.317-002 3.857-001	-4.677-002 3.530-001	3.948-002 -6.525-001	1.949-001 -2.195-001	2.550-001 -9.099-001
3.60	-9.367-002 6.491-002	-6.068-002 4.048-001	-7.849-002 3.287-001	4.883-002 -6.487-001	2.230-001 -1.758-001	2.717-001 -9.501-001
3.70	-9.018-002 9.063-002	-7.849-002 4.233-001	-1.098-001 2.988-001	6.207-002 -6.421-001	2.555-001 -1.289-001	2.863-001 -9.930-001
3.80	-8.745-002 1.196-001	-9.574-002 4.413-001	-1.401-001 2.633-001	8.050-002 -6.325-001	2.934-001 -7.920-002	2.981-001 -1.038+000
3.90	-8.488-002 1.527-001	-1.114-001 4.588-001	-1.693-001 2.218-001	1.058-001 -6.202-001	3.377-001 -2.776-002	3.059-001 -1.086+000
4.00	-8.155-002 1.907-001	-1.240-001 4.757-001	-1.970-001 1.742-001	1.403-001 -6.058-001	3.896-001 2.406-002	3.087-001 -1.137+000
4.50	2.732-002 4.744-001	-7.572-002 5.178-001	-3.328-001 -1.467-001	5.571-001 -6.245-001	7.696-001 1.659-001	1.966-001 -1.361+000
5.00	5.215-001 5.291-001	1.067-001 1.605-001	-5.008-001 -3.838-001	8.537-001 -1.552+000	7.001-001 -3.944-002	1.008-001 -1.240+000

Table A15a
Impedance Coefficients
$T = 0.5 \quad H = 0.5$

ka	Z_1		Z_2		Z_3		Z_1'		Z_2'		Z_3'	
0.01	3.514-006	1.022-003	2.498-005	3.103-003	9.780-006	1.333-003	3.126-005	2.409-003	1.172-005	7.766-004	1.874-005	2.035-003
0.05	8.781-005	5.107-003	6.237-004	1.549-002	2.440-004	6.652-003	7.802-004	1.201-002	2.927-004	3.872-003	4.681-004	1.016-002
0.10	3.508-004	1.021-002	2.484-003	3.084-002	9.694-004	1.323-002	3.104-003	2.380-002	1.166-003	7.672-003	1.867-003	2.025-002
0.15	7.875-004	1.530-002	5.550-003	4.590-002	2.157-003	1.967-002	6.920-003	3.518-002	2.607-003	1.133-002	4.181-003	3.017-002
0.20	1.396-003	2.037-002	9.769-003	6.055-002	3.777-003	2.591-002	1.215-002	4.593-002	4.592-003	1.479-002	7.385-003	3.985-002
0.30	3.117-003	3.047-002	2.139-002	8.814-002	8.139-003	3.754-002	2.639-002	5.491-002	1.007-002	2.083-002	1.633-002	5.824-002
0.40	5.493-003	4.047-002	3.665-002	1.128-001	1.364-002	4.778-002	4.471-002	7.958-002	1.730-002	2.539-002	2.837-002	7.496-002
0.50	8.514-003	5.039-002	5.476-002	1.340-001	1.979-002	5.646-002	6.581-002	8.922-002	2.593-002	2.814-002	4.318-002	8.968-002
0.60	1.219-002	6.026-002	7.492-002	1.515-001	2.609-002	6.354-002	8.835-002	9.347-002	3.559-002	2.882-002	6.043-002	1.022-001
0.70	1.658-002	7.012-002	9.641-002	1.651-001	3.209-002	6.914-002	1.110-001	9.230-002	4.590-002	2.727-002	7.990-002	1.123-001
0.80	2.177-002	8.000-002	1.186-001	1.749-001	3.738-002	7.351-002	1.327-001	8.589-002	5.653-002	2.329-002	1.015-001	1.200-001
0.90	2.792-002	8.993-002	1.409-001	1.808-001	4.165-002	7.694-002	1.522-001	7.460-002	6.710-002	1.672-002	1.252-001	1.249-001
1.00	3.527-002	9.987-002	1.629-001	1.827-001	4.463-002	7.985-002	1.685-001	5.890-002	7.718-002	7.306-003	1.511-001	1.266-001
1.10	4.412-002	1.097-001	1.840-001	1.807-001	4.618-002	8.271-002	1.806-001	3.940-002	8.621-002	-5.198-003	1.793-001	1.245-001
1.20	5.484-002	1.192-001	2.036-001	1.744-001	4.624-002	8.607-002	1.874-001	1.697-002	9.337-002	-2.105-002	2.098-001	1.176-001
1.30	6.783-002	1.278-001	2.206-001	1.637-001	4.494-002	9.059-002	1.875-001	-7.128-003	9.752-002	-4.038-002	2.421-001	1.044-001
1.40	8.338-002	1.347-001	2.337-001	1.485-001	4.264-002	9.700-002	1.799-001	-3.092-002	9.710-002	-6.292-002	2.751-001	8.294-002
1.50	1.015-001	1.386-001	2.410-001	1.295-001	4.013-002	1.060-001	1.640-001	-5.154-002	9.020-002	-8.763-002	3.064-001	5.150-002
1.60	1.215-001	1.382-001	2.402-001	1.082-001	3.866-002	1.179-001	1.405-001	-6.519-002	7.502-002	-1.123-001	3.320-001	8.953-003
1.70	1.417-001	1.320-001	2.297-001	8.784-002	3.985-002	1.326-001	1.123-001	-6.799-002	5.080-002	-1.331-001	3.465-001	-4.357-002
1.80	1.595-001	1.197-001	2.098-001	7.273-002	4.516-002	1.485-001	8.474-002	-5.760-002	1.899-002	-1.458-001	3.449-001	-1.016-001
1.90	1.720-001	1.026-001	1.831-001	6.705-002	5.513-002	1.636-001	6.456-002	-3.518-002	-1.625-002	-1.470-001	3.252-001	-1.576-001
2.00	1.778-001	8.347-002	1.545-001	7.283-002	6.889-002	1.757-001	5.677-002	-5.715-003	-4.931-002	-1.363-001	2.900-001	-2.038-001
2.10	1.770-001	6.541-002	1.291-001	8.902-002	8.450-002	1.834-001	6.257-002	2.407-002	-7.553-002	-1.165-001	2.456-001	-2.355-001
2.20	1.713-001	5.061-002	1.099-001	1.125-001	9.991-002	1.870-001	7.954-002	4.862-002	-9.281-002	-9.198-002	1.991-001	-2.522-001
2.30	1.628-001	3.989-002	9.784-002	1.398-001	1.137-001	1.874-001	1.036-001	6.504-002	-1.015-001	-6.659-002	1.556-001	-2.567-001
2.40	1.533-001	3.304-002	9.227-002	1.683-001	1.253-001	1.857-001	1.309-001	7.282-002	-1.033-001	-4.297-002	1.174-001	-2.526-001
2.50	1.439-001	2.937-002	9.197-002	1.964-001	1.345-001	1.830-001	1.585-001	7.279-002	-1.002-001	-2.237-002	8.516-002	-2.431-001
2.60	1.351-001	2.812-002	9.575-002	2.234-001	1.417-001	1.801-001	1.848-001	6.624-002	-9.386-002	-5.137-003	5.842-002	-2.305-001
2.70	1.272-001	2.863-002	1.027-001	2.491-001	1.473-001	1.774-001	2.088-001	5.442-002	-8.547-002	8.850-003	3.630-002	-2.163-001
2.80	1.202-001	3.042-002	1.121-001	2.737-001	1.515-001	1.753-001	2.299-001	3.838-002	-7.589-002	1.990-002	1.794-002	-2.012-001
2.90	1.140-001	3.313-002	1.238-001	2.971-001	1.546-001	1.740-001	2.480-001	1.892-002	-6.567-002	2.834-002	2.598-003	-1.856-001
3.00	1.085-001	3.656-002	1.375-001	3.198-001	1.571-001	1.735-001	2.629-001	-3.442-003	-5.518-002	3.446-002	-1.026-002	-1.697-001
3.10	1.035-001	4.058-002	1.534-001	3.416-001	1.591-001	1.739-001	2.743-001	-2.820-002	-4.465-002	3.850-002	-2.096-002	-1.533-001
3.20	9.906-002	4.513-002	1.716-001	3.626-001	1.609-001	1.753-001	2.821-001	-5.501-002	-3.427-002	4.061-002	-2.966-002	-1.363-001
3.30	9.495-002	5.020-002	1.924-001	3.825-001	1.627-001	1.776-001	2.859-001	-8.346-002	-2.420-002	4.089-002	-3.635-002	-1.186-001
3.40	9.117-002	5.584-002	2.161-001	4.011-001	1.648-001	1.808-001	2.854-001	-1.131-001	-1.462-002	3.939-002	-4.084-002	-1.001-001
3.50	8.769-002	6.210-002	2.427-001	4.179-001	1.675-001	1.850-001	2.802-001	-1.434-001	-5.769-003	3.615-002	-4.285-002	-8.065-002
3.60	8.453-002	6.908-002	2.726-001	4.320-001	1.709-001	1.898-001	2.699-001	-1.735-001	2.090-003	3.123-002	-4.192-002	-6.048-002
3.70	8.177-002	7.687-002	3.056-001	4.428-001	1.754-001	1.952-001	2.541-001	-2.024-001	8.620-003	2.472-002	-3.755-002	-3.984-002
3.80	7.951-002	8.557-002	3.412-001	4.488-001	1.812-001	2.009-001	2.329-001	-2.289-001	1.344-002	1.680-002	-2.915-002	-1.918-002
3.90	7.791-002	9.525-002	3.788-001	4.495-001	1.884-001	2.064-001	2.064-001	-2.515-001	1.615-002	7.790-003	-1.632-002	6.183-004
4.00	7.718-002	1.060-001	4.169-001	4.435-001	1.970-001	2.114-001	1.756-001	-2.688-001	1.641-002	-1.842-003	1.288-003	1.864-002
4.50	9.430-002	1.730-001	5.556-001	3.212-001	2.520-001	2.148-001	1.519-002	-2.504-001	-2.054-002	-3.623-002	1.466-001	4.033-002
5.00	1.680-001	2.550-001	5.226-001	1.709-001	2.887-001	1.856-001	-2.181-002	-1.374-001	-8.246-002	-3.290-003	2.948-001	-1.115-001

Table A15b
Pressure Coefficients
$T = 0.5 \quad H = 0.5$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	2.350-010 -1.875-003	6.266-010 -5.000-003	3.916-010 -3.125-003	1.779-010 -1.875-003	6.246-010 -5.000-003	2.964-010 -3.125-003
0.05	1.465-007 -9.373-003	3.905-007 -2.498-002	2.440-007 -1.560-002	1.461-007 -9.372-003	3.898-007 -2.499-002	2.434-007 -1.562-002
0.10	2.327-006 -1.874-002	6.192-006 -4.983-002	3.864-006 -3.106-002	2.333-006 -1.872-002	6.210-006 -4.991-002	3.875-006 -3.122-002
0.15	1.163-005 -2.809-002	3.088-005 -7.443-002	1.924-005 -4.624-002	1.176-005 -2.803-002	3.121-005 -7.469-002	1.944-005 -4.677-002
0.20	3.613-005 -3.741-002	9.559-005 -9.867-002	5.938-005 -6.100-002	3.691-005 -3.729-002	9.765-005 -9.927-002	6.065-005 -6.224-002
0.30	1.741-004 -5.599-002	4.560-004 -1.456-001	2.811-004 -8.876-002	1.835-004 -5.554-002	4.807-004 -1.476-001	2.962-004 -9.293-002
0.40	5.133-004 -7.449-002	1.327-003 -1.900-001	8.089-004 -1.134-001	5.665-004 -7.338-002	1.463-003 -1.945-001	8.917-004 -1.232-001
0.50	1.146-003 -9.303-002	2.910-003 -2.312-001	1.750-003 -1.343-001	1.346-003 -9.071-002	3.413-003 -2.397-001	2.049-003 -1.531-001
0.60	2.127-003 -1.118-001	5.288-003 -2.690-001	3.128-003 -1.506-001	2.708-003 -1.075-001	6.718-003 -2.830-001	3.957-003 -1.826-001
0.70	3.439-003 -1.310-001	8.347-003 -3.032-001	4.846-003 -1.621-001	4.868-003 -1.237-001	1.175-002 -3.245-001	6.760-003 -2.120-001
0.80	4.963-003 -1.511-001	1.173-002 -3.337-001	6.681-003 -1.681-001	8.063-003 -1.395-001	1.885-002 -3.642-001	1.053-002 -2.415-001
0.90	6.434-003 -1.723-001	1.481-002 -3.605-001	8.302-003 -1.684-001	1.257-002 -1.548-001	2.830-002 -4.024-001	1.527-002 -2.714-001
1.00	7.392-003 -1.951-001	1.666-002 -3.835-001	9.317-003 -1.624-001	1.869-002 -1.699-001	4.031-002 -4.392-001	2.083-002 -3.019-001
1.10	7.115-003 -2.198-001	1.608-002 -4.022-001	9.358-003 -1.495-001	2.677-002 -1.851-001	5.497-002 -4.754-001	2.696-002 -3.335-001
1.20	4.538-003 -2.468-001	1.162-002 -4.160-001	8.216-003 -1.292-001	3.718-002 -2.008-001	7.220-002 -5.114-001	3.320-002 -3.663-001
1.30	-1.815-003 -2.759-001	1.761-003 -4.235-001	6.045-003 -1.005-001	5.022-002 -2.178-001	9.159-002 -5.480-001	3.890-002 -4.005-001
1.40	-1.382-002 -3.065-001	-1.479-002 -4.224-001	3.622-003 -6.261-002	6.599-002 -2.372-001	1.122-001 -5.863-001	4.318-002 -4.360-001
1.50	-3.349-002 -3.367-001	-3.841-002 -4.096-001	2.627-003 -1.505-002	8.411-002 -2.605-001	1.324-001 -6.267-001	4.506-002 -4.719-001
1.60	-6.232-002 -3.633-001	-6.766-002 -3.810-001	5.705-003 4.162-002	1.033-001 -2.892-001	1.496-001 -6.694-001	4.379-002 -5.070-001
1.70	-1.001-001 -3.817-001	-9.832-002 -3.333-001	1.593-002 1.049-001	1.213-001 -3.244-001	1.610-001 -7.128-001	3.938-002 -5.391-001
1.80	-1.436-001 -3.870-001	-1.237-001 -2.659-001	3.537-002 1.699-001	1.349-001 -3.659-001	1.642-001 -7.535-001	3.321-002 -5.661-001
1.90	-1.868-001 -3.769-001	-1.368-001 -1.828-001	6.336-002 2.304-001	1.411-001 -4.113-001	1.591-001 -7.866-001	2.809-002 -5.868-001
2.00	-2.230-001 -3.527-001	-1.338-001 -9.189-002	9.590-002 2.810-001	1.389-001 -4.570-001	1.482-001 -8.078-001	2.723-002 -6.019-001
2.10	-2.477-001 -3.195-001	-1.160-001 -2.027-003	1.272-001 3.194-001	1.291-001 -4.995-001	1.359-001 -8.149-001	3.291-002 -6.137-001
2.20	-2.600-001 -2.830-001	-8.867-002 8.075-002	1.522-001 3.464-001	1.143-001 -5.366-001	1.264-001 -8.084-001	4.567-002 -6.253-001
2.30	-2.617-001 -2.478-001	-5.789-002 1.541-001	1.681-001 3.645-001	9.715-002 -5.680-001	1.224-001 -7.902-001	6.468-002 -6.389-001
2.40	-2.560-001 -2.165-001	-2.867-002 2.186-001	1.741-001 3.764-001	7.942-002 -5.941-001	1.250-001 -7.623-001	8.851-002 -6.562-001
2.50	-2.457-001 -1.896-001	-4.190-003 2.760-001	1.709-001 3.837-001	6.220-002 -6.160-001	1.345-001 -7.264-001	1.157-001 -6.778-001
2.60	-2.329-001 -1.671-001	1.399-002 3.281-001	1.597-001 3.874-001	4.591-002 -6.346-001	1.507-001 -6.834-001	1.451-001 -7.040-001
2.70	-2.193-001 -1.482-001	2.535-002 3.765-001	1.419-001 3.877-001	3.060-002 -6.504-001	1.732-001 -6.336-001	1.758-001 -7.347-001
2.80	-2.058-001 -1.320-001	3.004-002 4.225-001	1.188-001 3.844-001	1.619-002 -6.638-001	2.022-001 -5.771-001	2.070-001 -7.700-001
2.90	-1.930-001 -1.178-001	2.856-002 4.668-001	9.164-002 3.772-001	2.550-003 -6.750-001	2.380-001 -5.139-001	2.381-001 -8.100-001
3.00	-1.812-001 -1.050-001	2.164-002 5.099-001	6.132-002 3.654-001	-1.039-002 -6.838-001	2.812-001 -4.436-001	2.683-001 -8.547-001
3.10	-1.706-001 -9.284-002	1.012-002 5.519-001	2.880-002 3.486-001	-2.258-002 -6.900-001	3.328-001 -3.664-001	2.971-001 -9.042-001
3.20	-1.613-001 -8.092-002	-5.015-003 5.929-001	-5.165-003 3.264-001	-3.384-002 -6.934-001	3.940-001 -2.824-001	3.233-001 -9.586-001
3.30	-1.533-001 -6.874-002	-2.270-002 6.327-001	-3.989-002 2.983-001	-4.380-002 -6.935-001	4.664-001 -1.923-001	3.462-001 -1.018+000
3.40	-1.464-001 -5.588-002	-4.173-002 6.711-001	-7.480-002 2.642-001	-5.186-002 -6.900-001	5.519-001 -9.736-002	3.642-001 -1.082+000
3.50	-1.405-001 -4.195-002	-6.084-002 7.076-001	-1.095-001 2.240-001	-5.719-002 -6.827-001	6.521-001 8.275-004	3.762-001 -1.150+000
3.60	-1.354-001 -2.662-002	-7.871-002 7.416-001	-1.435-001 1.778-001	-5.866-002 -6.714-001	7.688-001 9.944-002	3.804-001 -1.222+000
3.70	-1.308-001 -9.608-003	-9.406-002 7.721-001	-1.767-001 1.261-001	-5.491-002 -6.564-001	9.031-001 1.949-001	3.754-001 -1.295+000
3.80	-1.263-001 9.267-003	-1.058-001 7.977-001	-2.089-001 6.955-002	-4.438-002 -6.383-001	1.055+000 2.820-001	3.600-001 -1.368+000
3.90	-1.214-001 3.007-002	-1.130-001 8.174-001	-2.398-001 9.122-003	-2.551-002 -6.182-001	1.223+000 3.566-001	3.336-001 -1.438+000
4.00	-1.156-001 5.272-002	-1.153-001 8.290-001	-2.691-001 -5.389-002	3.125-003 -5.982-001	1.403+000 4.123-001	2.962-001 -1.501+000
4.50	-6.505-002 1.831-001	-7.295-002 7.285-001	-3.678-001 -3.552-001	2.989-001 -5.936-001	2.256+000 3.341-001	3.276-002 -1.633+000
5.00	1.772-002 3.356-001	-1.206-002 3.864-001	-3.118-001 -5.373-001	6.998-001 -9.755-001	2.480+000 2.281-002	-5.009-002 -1.510+000

Table A16a
Impedance Coefficients
$T = 0.05 \quad H = 1.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	2.251-005	4.772-003	2.378-007	4.036-005	2.507-005	3.182-003	4.884-006	4.037-004	4.751-005	3.464-003	4.627-006	5.141-004
0.05	5.627-004	2.386-002	5.940-006	2.016-004	6.259-004	1.589-002	1.219-004	2.014-003	1.187-003	1.728-002	1.156-004	2.568-003
0.10	2.252-003	4.771-002	2.369-005	4.020-004	2.492-003	3.161-002	4.860-004	3.998-003	4.738-003	3.433-002	4.619-004	5.120-003
0.15	5.070-003	7.153-002	5.305-005	6.000-004	5.565-003	4.703-002	1.087-003	5.924-003	1.062-002	5.091-002	1.037-003	7.641-003
0.20	9.023-003	9.532-002	9.369-005	7.945-004	9.790-003	6.198-002	1.915-003	7.764-003	1.880-002	6.678-002	1.839-003	1.011-002
0.30	2.038-002	1.428-001	2.069-004	1.168-003	2.138-002	8.996-002	4.207-003	1.108-002	4.174-002	9.556-002	4.107-003	1.486-002
0.40	3.647-002	1.901-001	3.589-004	1.516-003	3.646-002	1.146-001	7.234-003	1.377-002	7.291-002	1.190-001	7.236-003	1.926-002
0.50	5.764-002	2.373-001	5.440-004	1.831-003	5.403-002	1.352-001	1.084-002	1.567-002	1.115-001	1.355-001	1.120-002	2.322-002
0.60	8.450-002	2.845-001	7.567-004	2.108-003	7.296-002	1.513-001	1.485-002	1.665-002	1.568-001	1.434-001	1.599-002	2.665-002
0.70	1.181-001	3.319-001	9.914-004	2.343-003	9.199-002	1.627-001	1.907-002	1.664-002	2.077-001	1.410-001	2.163-002	2.945-002
0.80	1.601-001	3.792-001	1.243-003	2.530-003	1.098-001	1.695-001	2.329-002	1.553-002	2.634-001	1.262-001	2.819-002	3.147-002
0.90	2.129-001	4.257-001	1.506-003	2.662-003	1.248-001	1.719-001	2.727-002	1.324-002	3.223-001	9.591-002	3.577-002	3.250-002
1.00	2.804-001	4.695-001	1.774-003	2.730-003	1.354-001	1.706-001	3.069-002	9.701-003	3.819-001	4.601-002	4.452-002	3.212-002
1.10	3.672-001	5.060-001	2.033-003	2.720-003	1.394-001	1.672-001	3.308-002	4.862-003	4.368-001	-2.899-002	5.449-002	2.965-002
1.20	4.779-001	5.255-001	2.259-003	2.611-003	1.346-001	1.645-001	3.373-002	-1.160-003	4.766-001	-1.350-001	6.543-002	2.397-002
1.30	6.133-001	5.105-001	2.401-003	2.392-003	1.197-001	1.682-001	3.171-002	-7.792-003	4.818-001	-2.742-001	7.625-002	1.355-002
1.40	7.591-001	4.363-001	2.376-003	2.082-003	9.727-002	1.864-001	2.615-002	-1.351-002	4.236-001	-4.333-001	8.408-002	-2.848-003
1.50	8.745-001	2.868-001	2.104-003	1.785-003	7.842-002	2.265-001	1.748-002	-1.570-002	2.802-001	-5.694-001	8.434-002	-2.395-002
1.60	9.046-001	8.786-002	1.610-003	1.679-003	8.057-002	2.842-001	8.650-003	-1.235-002	7.404-002	-6.200-001	7.391-002	-4.398-002
1.70	8.335-001	-9.145-002	1.073-003	1.865-003	1.121-001	3.402-001	3.625-003	-4.716-003	-1.215-001	-5.607-001	5.582-002	-5.587-002
1.80	7.050-001	-1.992-001	6.741-004	2.274-003	1.628-001	3.773-001	3.660-003	3.443-003	-2.460-001	-4.340-001	3.721-002	-5.794-002
1.90	5.730-001	-2.357-001	4.600-004	2.755-003	2.170-001	3.928-001	7.085-003	9.470-003	-2.946-001	-2.983-001	2.272-002	-5.365-002
2.00	4.640-001	-2.267-001	3.821-004	3.215-003	2.656-001	3.931-001	1.180-002	1.285-002	-2.928-001	-1.849-001	1.301-002	-4.690-002
2.10	3.822-001	-1.949-001	3.806-004	3.622-003	3.061-001	3.848-001	1.651-002	1.413-002	-2.653-001	-1.003-001	6.961-003	-3.992-002
2.20	3.230-001	-1.541-001	4.152-004	3.981-003	3.392-001	3.724-001	2.071-002	1.397-002	-2.275-001	-4.061-002	3.301-003	-3.358-002
2.30	2.807-001	-1.107-001	4.632-004	4.306-003	3.664-001	3.581-001	2.422-002	1.289-002	-1.874-001	-2.497-004	1.110-003	-2.808-002
2.40	2.505-001	-6.756-002	5.139-004	4.612-003	3.888-001	3.433-001	2.706-002	1.126-002	-1.487-001	2.590-002	-2.080-004	-2.333-002
2.50	2.289-001	-2.560-002	5.627-004	4.894-003	4.076-001	3.286-001	2.929-002	9.305-003	-1.128-001	4.166-002	-1.004-003	-1.917-002
2.60	2.136-001	1.521-002	6.083-004	5.168-003	4.234-001	3.141-001	3.101-002	7.173-003	-8.043-002	4.977-002	-1.489-003	-1.543-002
2.70	2.029-001	5.530-002	6.513-004	5.439-003	4.369-001	3.001-001	3.226-002	4.958-003	-5.149-002	5.218-002	-1.777-003	-1.196-002
2.80	1.960-001	9.530-002	6.932-004	5.712-003	4.484-001	2.867-001	3.313-002	2.722-003	-2.582-002	5.024-002	-1.923-003	-8.633-003
2.90	1.921-001	1.360-001	7.359-004	5.989-003	4.582-001	2.737-001	3.366-002	5.049-004	-3.166-003	4.493-002	-1.941-003	-5.329-003
3.00	1.911-001	1.782-001	7.818-004	6.275-003	4.666-001	2.612-001	3.390-002	-1.667-003	1.675-002	3.688-002	-1.814-003	-1.938-003
3.10	1.930-001	2.230-001	8.339-004	6.569-003	4.738-001	2.493-001	3.389-002	-3.780-003	3.421-002	2.652-002	-1.500-003	1.645-003
3.20	1.982-001	2.715-001	8.954-004	6.876-003	4.799-001	2.379-001	3.366-002	-5.827-003	4.943-002	1.407-002	-9.235-004	5.529-003
3.30	2.075-001	3.253-001	9.707-004	7.195-003	4.850-001	2.270-001	3.323-002	-7.810-003	6.262-002	-4.251-004	2.844-005	9.834-003
3.40	2.225-001	3.862-001	1.065-003	7.530-003	4.893-001	2.166-001	3.262-002	-9.738-003	7.385-002	-1.713-002	1.528-003	1.470-002
3.50	2.456-001	4.568-001	1.186-003	7.882-003	4.927-001	2.067-001	3.185-002	-1.163-002	8.319-002	-3.643-002	3.847-003	2.029-002
3.60	2.812-001	5.403-001	1.345-003	8.252-003	4.954-001	1.974-001	3.091-002	-1.351-002	9.043-002	-5.908-002	7.419-003	2.680-002
3.70	3.370-001	6.410-001	1.560-003	8.640-003	4.973-001	1.887-001	2.976-002	-1.542-002	9.491-002	-8.635-002	1.298-002	3.444-002
3.80	4.277-001	7.638-001	1.859-003	9.043-003	4.987-001	1.808-001	2.834-002	-1.745-002	9.495-002	-1.202-001	2.184-002	4.335-002
3.90	5.821-001	9.110-001	2.291-003	9.439-003	4.996-001	1.739-001	2.647-002	-1.966-002	8.647-002	-1.638-001	3.642-002	5.316-002
4.00	8.572-001	1.067+000	2.938-003	9.760-003	5.004-001	1.683-001	2.369-002	-2.210-002	5.928-002	-2.200-001	6.116-002	6.155-002
4.50	1.154+000	-1.092+000	2.385-003	7.416-003	5.160-001	1.275-001	1.013-002	-8.139-003	-2.039-001	6.143-002	4.177-002	-1.175-001
5.00	2.425-001	-5.047-001	2.326-003	1.017-002	5.001-001	9.789-002	1.342-002	-7.987-003	-2.849-002	5.110-002	-2.347-002	-4.595-002

Table A16b
Pressure Coefficients
$T = 0.05 \quad H = 1.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	1.314-010 -4.875-003	1.348-011 -5.000-004	1.381-010 -5.125-003	1.124-010 -4.875-003	1.249-011 -5.000-004	1.181-010 -5.125-003
0.05	8.145-008 -2.438-002	8.350-009 -2.499-003	8.556-008 -2.560-002	7.608-008 -2.437-002	7.795-009 -2.499-003	7.991-008 -2.562-002
0.10	1.270-006 -4.879-002	1.300-007 -4.990-003	1.331-006 -5.103-002	1.214-006 -4.872-002	1.243-007 -4.992-003	1.273-006 -5.122-002
0.15	6.147-006 -7.325-002	6.274-007 -7.466-003	6.415-006 -7.614-002	6.134-006 -7.301-002	6.261-007 -7.472-003	6.401-006 -7.677-002
0.20	1.818-005 -9.780-002	1.849-006 -9.920-003	1.887-005 -1.008-001	1.932-005 -9.723-002	1.964-006 -9.933-003	2.004-005 -1.022-001
0.30	7.413-005 -1.473-001	7.461-006 -1.474-002	7.581-005 -1.480-001	9.687-005 -1.454-001	9.741-006 -1.478-002	9.882-005 -1.529-001
0.40	1.551-004 -1.979-001	1.542-005 -1.940-002	1.563-004 -1.916-001	3.025-004 -1.929-001	2.995-005 -1.947-002	3.012-004 -2.031-001
0.50	1.287-004 -2.501-001	1.287-005 -2.388-002	1.353-004 -2.305-001	7.287-004 -2.397-001	7.066-005 -2.398-002	7.025-004 -2.526-001
0.60	-3.772-004 -3.049-001	-3.396-005 -2.817-002	-3.005-004 -2.637-001	1.491-003 -2.857-001	1.409-004 -2.827-002	1.379-003 -3.014-001
0.70	-2.157-003 -3.636-001	-1.917-004 -3.226-002	-1.729-003 -2.904-001	2.730-003 -3.306-001	2.499-004 -3.229-002	2.397-003 -3.494-001
0.80	-6.718-003 -4.277-001	-5.750-004 -3.616-002	-5.049-003 -3.093-001	4.617-003 -3.746-001	4.066-004 -3.601-002	3.798-003 -3.967-001
0.90	-1.675-002 -4.993-001	-1.366-003 -3.986-002	-1.149-002 -3.188-001	7.361-003 -4.175-001	6.190-004 -3.943-002	5.586-003 -4.432-001
1.00	-3.688-002 -5.801-001	-2.837-003 -4.326-002	-2.245-002 -3.163-001	1.121-002 -4.594-001	8.926-004 -4.250-002	7.694-003 -4.890-001
1.10	-7.484-002 -6.709-001	-5.367-003 -4.618-002	-3.906-002 -2.978-001	1.645-002 -5.008-001	1.227-003 -4.525-002	9.937-003 -5.344-001
1.20	-1.426-001 -7.687-001	-9.409-003 -4.808-002	-6.067-002 -2.566-001	2.328-002 -5.422-001	1.607-003 -4.766-002	1.193-002 -5.793-001
1.30	-2.558-001 -8.611-001	-1.527-002 -4.795-002	-8.176-002 -1.838-001	3.147-002 -5.847-001	1.983-003 -4.977-002	1.300-002 -6.236-001
1.40	-4.254-001 -9.177-001	-2.250-002 -4.412-002	-8.697-002 -7.234-002	3.975-002 -6.297-001	2.250-003 -5.157-002	1.227-002 -6.668-001
1.50	-6.351-001 -8.919-001	-2.893-002 -3.509-002	-5.084-002 7.089-002	4.516-002 -6.778-001	2.259-003 -5.296-002	9.258-003 -7.072-001
1.60	-8.224-001 -7.559-001	-3.100-002 -2.168-002	4.395-002 2.129-001	4.435-002 -7.263-001	1.940-003 -5.371-002	5.104-003 -7.428-001
1.70	-9.170-001 -5.475-001	-2.689-002 -7.775-003	1.796-001 3.134-001	3.719-002 -7.703-001	1.438-003 -5.360-002	2.358-003 -7.733-001
1.80	-9.075-001 -3.426-001	-1.858-002 2.936-003	3.149-001 3.622-001	2.726-002 -8.070-001	9.981-004 -5.258-002	2.674-003 -8.005-001
1.90	-8.347-001 -1.866-001	-9.303-003 9.750-003	4.226-001 3.785-001	1.813-002 -8.370-001	7.465-004 -5.079-002	5.738-003 -8.263-001
2.00	-7.403-001 -8.299-002	-1.041-003 1.383-002	4.982-001 3.844-001	1.117-002 -8.622-001	6.751-004 -4.835-002	1.042-002 -8.514-001
2.10	-6.472-001 -1.799-002	5.620-003 1.648-002	5.475-001 3.922-001	6.319-003 -8.843-001	7.280-004 -4.532-002	1.578-002 -8.760-001
2.20	-5.639-001 2.255-002	1.074-002 1.856-002	5.774-001 4.064-001	3.042-003 -9.039-001	8.548-004 -4.170-002	2.129-002 -8.996-001
2.30	-4.920-001 4.865-002	1.453-002 2.052-002	5.927-001 4.277-001	8.465-004 -9.214-001	1.021-003 -3.748-002	2.664-002 -9.219-001
2.40	-4.307-001 6.673-002	1.723-002 2.259-002	5.965-001 4.553-001	-6.419-004 -9.366-001	1.207-003 -3.265-002	3.169-002 -9.427-001
2.50	-3.785-001 8.077-002	1.901-002 2.486-002	5.908-001 4.876-001	-1.676-003 -9.497-001	1.402-003 -2.722-002	3.636-002 -9.618-001
2.60	-3.340-001 9.325-002	1.998-002 2.735-002	5.766-001 5.232-001	-2.414-003 -9.603-001	1.600-003 -2.118-002	4.060-002 -9.790-001
2.70	-2.959-001 1.058-001	2.025-002 3.006-002	5.547-001 5.606-001	-2.946-003 -9.685-001	1.802-003 -1.452-002	4.439-002 -9.941-001
2.80	-2.634-001 1.195-001	1.990-002 3.298-002	5.255-001 5.986-001	-3.308-003 -9.740-001	2.008-003 -7.247-003	4.771-002 -1.007+000
2.90	-2.356-001 1.352-001	1.898-002 3.607-002	4.896-001 6.359-001	-3.489-003 -9.767-001	2.224-003 6.321-004	5.053-002 -1.018+000
3.00	-2.121-001 1.538-001	1.754-002 3.932-002	4.473-001 6.714-001	-3.438-003 -9.764-001	2.457-003 9.105-003	5.285-002 -1.026+000
3.10	-1.923-001 1.760-001	1.564-002 4.271-002	3.990-001 7.042-001	-3.059-003 -9.729-001	2.714-003 1.816-002	5.467-002 -1.032+000
3.20	-1.758-001 2.029-001	1.333-002 4.623-002	3.452-001 7.332-001	-2.196-003 -9.661-001	3.007-003 2.776-002	5.597-002 -1.035+000
3.30	-1.623-001 2.356-001	1.067-002 4.989-002	2.863-001 7.575-001	-6.179-004 -9.558-001	3.353-003 3.791-002	5.677-002 -1.036+000
3.40	-1.511-001 2.759-001	7.733-003 5.372-002	2.231-001 7.763-001	2.023-003 -9.417-001	3.771-003 4.856-002	5.706-002 -1.035+000
3.50	-1.414-001 3.265-001	4.619-003 5.777-002	1.561-001 7.886-001	6.266-003 -9.236-001	4.290-003 5.969-002	5.683-002 -1.031+000
3.60	-1.315-001 3.910-001	1.474-003 6.214-002	8.617-002 7.937-001	1.297-002 -9.011-001	4.953-003 7.127-002	5.605-002 -1.024+000
3.70	-1.179-001 4.753-001	-1.461-003 6.703-002	1.395-002 7.902-001	2.356-002 -8.739-001	5.826-003 8.325-002	5.467-002 -1.015+000
3.80	-9.324-002 5.884-001	-3.746-003 7.268-002	-5.987-002 7.770-001	4.057-002 -8.419-001	7.017-003 9.557-002	5.253-002 -1.004+000
3.90	-3.999-002 7.433-001	-4.490-003 7.947-002	-1.352-001 7.517-001	6.864-002 -8.058-001	8.714-003 1.081-001	4.928-002 -9.907-001
4.00	8.459-002 9.536-001	-1.750-003 8.753-002	-2.138-001 7.113-001	1.162-001 -7.704-001	1.122-002 1.205-001	4.409-002 -9.753-001
4.50	1.211+000 -3.062-001	1.368-002 2.160-002	-7.281-001 5.494-001	7.482-002 -9.755-001	8.768-003 1.686-001	1.787-002 -8.133-001
5.00	4.219-001 -3.383-001	-3.094-002 1.355-002	-9.125-001 2.164-001	-3.799-002 -6.559-001	7.309-003 2.322-001	2.035-002 -6.267-001

Table A17a
Impedance Coefficients
$T = 0.1 \quad H = 1.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	2.050-005	4.518-003	9.094-007	1.405-004	2.505-005	3.134-003	9.546-006	7.585-004	4.532-005	3.176-003	8.635-006	9.458-004
0.05	5.125-004	2.259-002	2.271-005	7.015-004	6.252-004	1.564-002	2.383-004	3.783-003	1.132-003	1.584-002	2.158-004	4.724-003
0.10	2.051-003	4.517-002	9.056-005	1.398-003	2.488-003	3.112-002	9.494-004	7.506-003	4.518-003	3.145-002	8.619-004	9.419-003
0.15	4.617-003	6.775-002	2.027-004	2.086-003	5.552-003	4.627-002	2.122-003	1.111-002	1.013-002	4.659-002	1.935-003	1.405-002
0.20	8.215-003	9.031-002	3.577-004	2.759-003	9.756-003	6.095-002	3.736-003	1.454-002	1.791-002	6.104-002	3.428-003	1.860-002
0.30	1.855-002	1.354-001	7.884-004	4.047-003	2.124-002	8.833-002	8.184-003	2.068-002	3.970-002	8.702-002	7.648-003	2.733-002
0.40	3.321-002	1.806-001	1.364-003	5.234-003	3.609-002	1.123-001	1.403-002	2.555-002	6.921-002	1.078-001	1.346-002	3.542-002
0.50	5.253-002	2.261-001	2.062-003	6.297-003	5.323-002	1.323-001	2.094-002	2.887-002	1.057-001	1.218-001	2.081-002	4.272-002
0.60	7.716-002	2.722-001	2.860-003	7.217-003	7.149-002	1.478-001	2.857-002	3.041-002	1.482-001	1.276-001	2.970-002	4.909-002
0.70	1.082-001	3.191-001	3.739-003	7.980-003	8.963-002	1.588-001	3.654-002	3.002-002	1.961-001	1.236-001	4.021-002	5.439-002
0.80	1.476-001	3.669-001	4.682-003	8.569-003	1.063-001	1.654-001	4.446-002	2.754-002	2.485-001	1.075-001	5.253-002	5.837-002
0.90	1.982-001	4.154-001	5.674-003	8.958-003	1.201-001	1.680-001	5.185-002	2.281-002	3.041-001	7.638-002	6.698-002	6.063-002
1.00	2.645-001	4.628-001	6.695-003	9.107-003	1.293-001	1.674-001	5.811-002	1.567-002	3.605-001	2.572-002	8.397-002	6.035-002
1.10	3.525-001	5.045-001	7.704-003	8.950-003	1.319-001	1.652-001	6.229-002	5.986-003	4.124-001	-5.070-002	1.039-001	5.606-002
1.20	4.693-001	5.296-001	8.603-003	8.392-003	1.256-001	1.647-001	6.291-002	-6.035-003	4.482-001	-1.600-001	1.264-001	4.514-002
1.30	6.172-001	5.166-001	9.173-003	7.353-003	1.096-001	1.720-001	5.786-002	-1.914-002	4.452-001	-3.047-001	1.494-001	2.374-002
1.40	7.797-001	4.328-001	9.025-003	5.914-003	8.788-002	1.962-001	4.530-002	-2.973-002	3.692-001	-4.678-001	1.658-001	-1.145-002
1.50	9.022-001	2.583-001	7.781-003	4.577-003	7.489-002	2.435-001	2.684-002	-3.175-002	1.984-001	-5.932-001	1.643-001	-5.703-002
1.60	9.161-001	3.409-002	5.648-003	4.179-003	8.925-002	3.036-001	1.032-002	-2.168-002	-2.573-002	-6.091-001	1.384-001	-9.787-002
1.70	8.170-001	-1.491-001	3.538-003	5.053-003	1.328-001	3.526-001	3.853-003	-4.712-003	-2.099-001	-5.095-001	9.844-002	-1.177-001
1.80	6.711-001	-2.432-001	2.152-003	6.698-003	1.883-001	3.773-001	7.485-003	1.049-002	-3.036-001	-3.619-001	6.142-002	-1.173-001
1.90	5.360-001	-2.644-001	1.507-003	8.472-003	2.403-001	3.819-001	1.621-002	2.000-002	-3.229-001	-2.261-001	3.488-002	-1.061-001
2.00	4.313-001	-2.458-001	1.331-003	1.008-002	2.833-001	3.751-001	2.595-002	2.424-002	-3.018-001	-1.227-001	1.804-002	-9.198-002
2.10	3.556-001	-2.101-001	1.390-003	1.147-002	3.177-001	3.631-001	3.483-002	2.483-002	-2.639-001	-5.014-002	7.817-003	-7.856-002
2.20	3.018-001	-1.689-001	1.549-003	1.268-002	3.453-001	3.493-001	4.229-002	2.316-002	-2.217-001	-1.410-003	1.653-003	-6.686-002
2.30	2.635-001	-1.273-001	1.740-003	1.377-002	3.678-001	3.350-001	4.829-002	2.012-002	-1.805-001	3.017-002	-2.136-003	-5.689-002
2.40	2.361-001	-8.714-002	1.933-003	1.481-002	3.865-001	3.211-001	5.298-002	1.630-002	-1.426-001	4.957-002	-4.559-003	-4.836-002
2.50	2.162-001	-4.875-002	2.119-003	1.577-002	4.023-001	3.076-001	5.654-002	1.208-002	-1.084-001	6.028-002	-6.179-003	-4.088-002
2.60	2.018-001	-1.191-002	2.299-003	1.672-002	4.158-001	2.947-001	5.914-002	7.665-003	-7.822-002	6.468-002	-7.327-003	-3.414-002
2.70	1.913-001	2.391-002	2.475-003	1.766-002	4.276-001	2.823-001	6.091-002	3.186-003	-5.164-002	6.440-002	-8.172-003	-2.785-002
2.80	1.839-001	5.933-002	2.656-003	1.861-002	4.378-001	2.705-001	6.197-002	-1.261-003	-2.842-002	6.059-002	-8.788-003	-2.178-002
2.90	1.789-001	9.505-002	2.849-003	1.958-002	4.467-001	2.591-001	6.242-002	-5.618-003	-8.253-003	5.403-002	-9.183-003	-1.571-002
3.00	1.763-001	1.318-001	3.064-003	2.059-002	4.546-001	2.481-001	6.232-002	-9.843-003	9.152-003	4.529-002	-9.316-003	-9.459-003
3.10	1.758-001	1.705-001	3.313-003	2.162-002	4.615-001	2.376-001	6.175-002	-1.391-002	2.403-002	3.473-002	-9.107-003	-2.863-003
3.20	1.777-001	2.121-001	3.608-003	2.270-002	4.675-001	2.274-001	6.076-002	-1.782-002	3.658-002	2.257-002	-8.427-003	4.254-003
3.30	1.827-001	2.577-001	3.964-003	2.382-002	4.728-001	2.176-001	5.938-002	-2.155-002	4.694-002	8.933-003	-7.087-003	1.207-002
3.40	1.915-001	3.087-001	4.401-003	2.499-002	4.773-001	2.082-001	5.764-002	-2.510-002	5.519-002	-6.216-003	-4.818-003	2.080-002
3.50	2.058-001	3.671-001	4.945-003	2.621-002	4.812-001	1.992-001	5.557-002	-2.850-002	6.130-002	-2.304-002	-1.218-003	3.066-002
3.60	2.283-001	4.353-001	5.629-003	2.747-002	4.845-001	1.905-001	5.314-002	-3.176-002	6.510-002	-4.186-002	4.327-003	4.192-002
3.70	2.635-001	5.165-001	6.503-003	2.878-002	4.873-001	1.823-001	5.033-002	-3.491-002	6.610-002	-6.326-002	1.279-002	5.488-002
3.80	3.195-001	6.147-001	7.645-003	3.011-002	4.896-001	1.746-001	4.706-002	-3.800-002	6.334-002	-8.810-002	2.581-002	6.976-002
3.90	4.116-001	7.341-001	9.177-003	3.141-002	4.915-001	1.674-001	4.312-002	-4.106-002	5.463-002	-1.176-001	4.623-002	8.641-002
4.00	5.697-001	8.749-001	1.129-002	3.254-002	4.932-001	1.609-001	3.812-002	-4.407-002	3.535-002	-1.530-001	7.913-002	1.032-001
4.50	1.614+000	-8.962-001	1.278-002	2.082-002	5.058-001	1.194-001	1.146-002	-1.802-002	-2.200-001	6.083-002	1.513-001	-2.431-001
5.00	2.878-001	-5.699-001	1.021-002	3.208-002	4.893-001	9.107-002	2.127-002	-1.833-002	-1.670-002	6.014-002	-5.363-002	-1.010-001

Table A17b
Pressure Coefficients
$T = 0.1 \quad H = 1.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	2.378-010 -4.750-003	5.006-011 -1.000-003	2.628-010 -5.250-003	2.285-010 -4.750-003	5.002-011 -1.000-003	2.525-010 -5.250-003
0.05	1.479-007 -2.375-002	3.111-008 -4.997-003	1.633-007 -2.622-002	1.484-007 -2.374-002	3.123-008 -4.997-003	1.639-007 -2.624-002
0.10	2.327-006 -4.754-002	4.888-007 -9.978-003	2.563-006 -5.226-002	2.370-006 -4.745-002	4.979-007 -9.980-003	2.610-006 -5.246-002
0.15	1.146-005 -7.138-002	2.399-006 -1.493-002	1.256-005 -7.794-002	1.197-005 -7.110-002	2.506-006 -1.493-002	1.312-005 -7.861-002
0.20	3.478-005 -9.532-002	7.254-006 -1.983-002	3.791-005 -1.031-001	3.767-005 -9.464-002	7.855-006 -1.984-002	4.104-005 -1.047-001
0.30	1.556-004 -1.437-001	3.207-005 -2.943-002	1.667-004 -1.511-001	1.887-004 -1.413-001	3.888-005 -2.946-002	2.019-004 -1.564-001
0.40	4.018-004 -1.932-001	8.154-005 -3.871-002	4.210-004 -1.951-001	5.885-004 -1.872-001	1.192-004 -3.875-002	6.133-004 -2.075-001
0.50	6.992-004 -2.445-001	1.394-004 -4.762-002	7.176-004 -2.340-001	1.417-003 -2.321-001	2.805-004 -4.759-002	1.425-003 -2.578-001
0.60	7.285-004 -2.988-001	1.443-004 -5.614-002	7.614-004 -2.668-001	2.898-003 -2.760-001	5.578-004 -5.591-002	2.786-003 -3.073-001
0.70	-2.780-004 -3.577-001	-3.771-005 -6.429-002	-4.479-005 -2.925-001	5.311-003 -3.186-001	9.872-004 -6.365-002	4.824-003 -3.561-001
0.80	-3.868-003 -4.229-001	-6.487-004 -7.210-002	-2.670-003 -3.099-001	9.003-003 -3.600-001	1.604-003 -7.075-002	7.615-003 -4.042-001
0.90	-1.293-002 -4.971-001	-2.087-003 -7.959-002	-8.470-003 -3.173-001	1.442-002 -4.002-001	2.443-003 -7.718-002	1.116-002 -4.519-001
1.00	-3.270-002 -5.828-001	-4.973-003 -8.662-002	-1.905-002 -3.120-001	2.214-002 -4.396-001	3.531-003 -8.296-002	1.531-002 -4.993-001
1.10	-7.233-002 -6.915-001	-1.021-002 -9.278-002	-3.566-002 -2.892-001	3.284-002 -4.790-001	4.872-003 -8.812-002	1.968-002 -5.470-001
1.20	-1.468-001 -7.906-001	-1.893-002 -9.694-002	-5.747-002 -2.412-001	4.710-002 -5.198-001	6.412-003 -9.279-002	2.341-002 -5.952-001
1.30	-2.768-001 -8.947-001	-3.199-002 -9.655-002	-7.729-002 -1.576-001	6.459-002 -5.649-001	7.939-003 -9.713-002	2.498-002 -6.439-001
1.40	-4.768-001 -9.535-001	-4.818-002 -8.742-002	-7.499-002 -3.083-002	8.217-002 -6.180-001	8.953-003 -1.012-001	2.239-002 -6.913-001
1.50	-7.200-001 -9.048-001	-6.156-002 -6.599-002	-1.896-002 1.254-001	9.222-002 -6.800-001	8.752-003 -1.046-001	1.501-002 -7.337-001
1.60	-9.166-001 -7.234-001	-6.318-002 -3.574-002	1.037-001 2.644-001	8.709-002 -7.435-001	7.131-003 -1.062-001	6.445-003 -7.670-001
1.70	-9.866-001 -4.788-001	-5.071-002 -7.370-003	2.568-001 3.439-001	6.883-002 -7.968-001	4.971-003 -1.051-001	2.669-003 -7.923-001
1.80	-9.428-001 -2.656-001	-3.112-002 1.200-002	3.909-001 3.694-001	4.726-002 -8.355-001	3.338-003 -1.015-001	5.799-003 -8.146-001
1.90	-8.460-001 -1.195-001	-1.172-002 2.306-002	4.863-001 3.714-001	2.926-002 -8.633-001	2.561-003 -9.612-002	1.379-002 -8.374-001
2.00	-7.399-001 -3.055-002	4.390-003 2.930-002	5.474-001 3.720-001	1.628-002 -8.850-001	2.463-003 -8.940-002	2.404-002 -8.615-001
2.10	-6.431-001 2.130-002	1.683-002 3.345-002	5.837-001 3.801-001	7.396-003 -9.032-001	2.786-003 -8.151-002	3.491-002 -8.864-001
2.20	-5.599-001 5.141-002	2.610-002 3.703-002	6.026-001 3.975-001	1.320-003 -9.192-001	3.341-003 -7.245-002	4.560-002 -9.113-001
2.30	-4.899-001 6.949-002	3.280-002 4.072-002	6.087-001 4.229-001	-2.957-003 -9.333-001	4.017-003 -6.215-002	5.573-002 -9.358-001
2.40	-4.311-001 8.128-002	3.741-002 4.484-002	6.046-001 4.547-001	-6.122-003 -9.455-001	4.756-003 -5.053-002	6.512-002 -9.593-001
2.50	-3.814-001 9.016-002	4.027-002 4.948-002	5.917-001 4.909-001	-8.609-003 -9.555-001	5.531-003 -3.767-002	7.368-002 -9.814-001
2.60	-3.391-001 9.817-002	4.161-002 5.464-002	5.708-001 5.298-001	-1.068-002 -9.631-001	6.335-003 -2.349-002	8.134-002 -1.002+000
2.70	-3.031-001 1.066-001	4.161-002 6.027-002	5.425-001 5.699-001	-1.246-002 -9.680-001	7.173-003 -7.964-003	8.806-002 -1.021+000
2.80	-2.724-001 1.163-001	4.040-002 6.632-002	5.072-001 6.097-001	-1.399-002 -9.699-001	8.061-003 8.893-003	9.379-002 -1.038+000
2.90	-2.461-001 1.280-001	3.810-002 7.272-002	4.651-001 6.480-001	-1.522-002 -9.687-001	9.021-003 2.707-002	9.850-002 -1.052+000
3.00	-2.239-001 1.423-001	3.480-002 7.942-002	4.166-001 6.838-001	-1.604-002 -9.640-001	1.009-002 4.655-002	1.022-001 -1.065+000
3.10	-2.052-001 1.598-001	3.060-002 8.637-002	3.621-001 7.158-001	-1.626-002 -9.555-001	1.129-002 6.728-002	1.048-001 -1.075+000
3.20	-1.898-001 1.813-001	2.562-002 9.354-002	3.021-001 7.432-001	-1.557-002 -9.429-001	1.269-002 8.922-002	1.063-001 -1.082+000
3.30	-1.772-001 2.077-001	1.997-002 1.009-001	2.371-001 7.652-001	-1.357-002 -9.260-001	1.434-002 1.123-001	1.068-001 -1.087+000
3.40	-1.671-001 2.404-001	1.378-002 1.085-001	1.678-001 7.808-001	-9.677-003 -9.044-001	1.632-002 1.365-001	1.062-001 -1.089+000
3.50	-1.589-001 2.811-001	7.260-003 1.164-001	9.477-002 7.894-001	-3.030-003 -8.776-001	1.873-002 1.617-001	1.044-001 -1.088+000
3.60	-1.517-001 3.326-001	6.407-004 1.247-001	1.883-002 7.901-001	7.654-003 -8.453-001	2.171-002 1.877-001	1.015-001 -1.085+000
3.70	-1.435-001 3.988-001	-5.706-003 1.336-001	-5.929-002 7.823-001	2.439-002 -8.069-001	2.544-002 2.146-001	9.740-002 -1.079+000
3.80	-1.305-001 4.858-001	-1.118-002 1.435-001	-1.389-001 7.649-001	5.048-002 -7.621-001	3.024-002 2.420-001	9.189-002 -1.070+000
3.90	-1.040-001 6.028-001	-1.469-002 1.549-001	-2.196-001 7.370-001	9.163-002 -7.116-001	3.657-002 2.693-001	8.461-002 -1.058+000
4.00	-4.414-002 7.625-001	-1.409-002 1.681-001	-3.018-001 6.969-001	1.579-001 -6.588-001	4.518-002 2.966-001	7.480-002 -1.044+000
4.50	1.465+000 1.623-002	5.386-002 5.726-002	-8.001-001 4.792-001	2.886-001 -1.209+000	4.924-002 3.629-001	2.201-002 -8.517-001
5.00	4.752-001 -3.559-001	-6.234-002 2.415-002	-9.404-001 1.207-001	-8.966-002 -7.348-001	3.360-002 5.062-001	3.467-002 -6.593-001

Table A18a
Impedance Coefficients
$T = 0.2 \quad H = 1.0$

ka	Z_1		Z_2		Z_3		Z_1		Z_2		Z_3	
0.01	1.684-005	4.007-003	3.334-006	4.662-004	2.521-005	3.061-003	1.834-005	1.366-003	4.120-005	2.702-003	1.499-005	1.607-003
0.05	4.210-004	2.004-002	8.326-005	2.328-003	6.289-004	1.528-002	4.577-004	6.811-003	1.029-003	1.347-002	3.744-004	8.026-003
0.10	1.684-003	4.008-002	3.317-004	4.638-003	2.501-003	3.038-002	1.822-003	1.350-002	4.104-003	2.672-002	1.495-003	1.600-002
0.15	3.790-003	6.013-002	7.416-004	6.911-003	5.572-003	4.513-002	4.065-003	1.995-002	9.190-003	3.952-002	3.353-003	2.386-002
0.20	6.741-003	8.021-002	1.307-003	9.130-003	9.771-003	5.938-002	7.146-003	2.604-002	1.623-002	5.164-002	5.936-003	3.158-002
0.30	1.521-002	1.205-001	2.869-003	1.335-002	2.115-002	8.579-002	1.558-002	3.676-002	3.586-002	7.309-002	1.321-002	4.637-002
0.40	2.721-002	1.612-001	4.937-003	1.719-002	3.566-002	1.087-001	2.653-002	4.496-002	6.227-002	8.959-002	2.318-002	6.009-002
0.50	4.306-002	2.027-001	7.422-003	2.057-002	5.215-002	1.276-001	3.932-002	5.015-002	9.464-002	9.983-002	3.575-002	7.254-002
0.60	6.340-002	2.455-001	1.024-002	2.346-002	6.936-002	1.421-001	5.323-002	5.198-002	1.322-001	1.026-001	5.094-002	8.359-002
0.70	8.940-002	2.902-001	1.333-002	2.581-002	8.607-002	1.525-001	6.754-002	5.023-002	1.744-001	9.633-002	6.899-002	9.308-002
0.80	1.231-001	3.373-001	1.664-002	2.759-002	1.010-001	1.589-001	8.155-002	4.468-002	2.204-001	7.916-002	9.041-002	1.008-001
0.90	1.678-001	3.873-001	2.016-002	2.870-002	1.129-001	1.620-001	9.443-002	3.507-002	2.695-001	4.801-002	1.161-001	1.060-001
1.00	2.288-001	4.391-001	2.386-002	2.899-002	1.201-001	1.627-001	1.051-001	2.104-002	3.195-001	-1.884-003	1.473-001	1.073-001
1.10	3.144-001	4.888-001	2.765-002	2.816-002	1.208-001	1.628-001	1.116-001	2.243-003	3.653-001	-7.759-002	1.857-001	1.016-001
1.20	4.354-001	5.247-001	3.121-002	2.574-002	1.132-001	1.660-001	1.110-001	-2.103-002	3.941-001	-1.878-001	2.317-001	8.281-002
1.30	5.989-001	5.191-001	3.360-002	2.119-002	9.694-002	1.792-001	9.837-002	-4.600-002	3.785-001	-3.360-001	2.811-001	4.073-002
1.40	7.856-001	4.252-001	3.288-002	1.474-002	7.912-002	2.122-001	6.982-002	-6.378-002	2.760-001	-4.980-001	3.169-001	-3.477-002
1.50	9.163-001	2.157-001	2.719-002	8.985-003	7.891-002	2.671-001	3.172-002	-5.990-002	6.925-002	-5.952-001	3.080-001	-1.339-001
1.60	9.017-001	-3.716-002	1.814-002	8.033-003	1.125-001	3.229-001	5.416-003	-3.128-002	-1.625-001	-5.504-001	2.429-001	-2.131-001
1.70	7.672-001	-2.130-001	1.043-002	1.235-002	1.677-001	3.544-001	4.067-003	3.283-003	-3.077-001	-4.016-001	1.575-001	-2.404-001
1.80	6.089-001	-2.829-001	6.191-003	1.880-002	2.216-001	3.603-001	1.932-002	2.707-002	-3.497-001	-2.435-001	8.873-002	-2.289-001
1.90	4.793-001	-2.859-001	4.622-003	2.504-002	2.645-001	3.525-001	3.905-002	3.800-002	-3.320-001	-1.217-001	4.402-002	-2.029-001
2.00	3.857-001	-2.595-001	4.460-003	3.039-002	2.970-001	3.396-001	5.728-002	4.000-002	-2.909-001	-3.883-002	1.701-002	-1.759-001
2.10	3.202-001	-2.231-001	4.920-003	3.492-002	3.219-001	3.259-001	7.231-002	3.675-002	-2.446-001	1.488-002	7.045-004	-1.520-001
2.20	2.742-001	-1.854-001	5.621-003	3.889-002	3.418-001	3.127-001	8.411-002	3.058-002	-2.001-001	4.865-002	-9.509-003	-1.319-001
2.30	2.414-001	-1.492-001	6.399-003	4.253-002	3.581-001	3.004-001	9.307-002	2.279-002	-1.598-001	6.893-002	-1.631-002	-1.151-001
2.40	2.175-001	-1.153-001	7.199-003	4.595-002	3.721-001	2.891-001	9.966-002	1.419-002	-1.242-001	7.998-002	-2.119-002	-1.007-001
2.50	1.995-001	-8.380-002	8.018-003	4.926-002	3.843-001	2.785-001	1.043-001	5.247-003	-9.301-002	8.457-002	-2.497-002	-8.793-002
2.60	1.858-001	-5.410-002	8.868-003	5.252-002	3.951-001	2.686-001	1.072-001	-3.766-003	-6.586-002	8.448-002	-2.807-002	-7.627-002
2.70	1.751-001	-2.570-002	9.776-003	5.580-002	4.049-001	2.591-001	1.087-001	-1.268-002	-4.234-002	8.094-002	-3.068-002	-6.523-002
2.80	1.666-001	1.981-003	1.077-002	5.911-002	4.138-001	2.501-001	1.089-001	-2.137-002	-2.210-002	7.479-002	-3.287-002	-5.442-002
2.90	1.599-001	2.951-002	1.190-002	6.250-002	4.220-001	2.413-001	1.079-001	-2.975-002	-4.832-003	6.663-002	-3.460-002	-4.353-002
3.00	1.545-001	5.748-002	1.319-002	6.596-002	4.295-001	2.328-001	1.060-001	-3.775-002	9.709-003	5.690-002	-3.578-002	-3.231-002
3.10	1.506-001	8.647-002	1.468-002	6.951-002	4.364-001	2.245-001	1.032-001	-4.531-002	2.171-002	4.592-002	-3.625-002	-2.053-002
3.20	1.480-001	1.171-001	1.643-002	7.312-002	4.428-001	2.163-001	9.950-002	-5.239-002	3.133-002	3.395-002	-3.579-002	-8.000-003
3.30	1.471-001	1.502-001	1.847-002	7.680-002	4.486-001	2.083-001	9.508-002	-5.895-002	3.865-002	2.118-002	-3.412-002	5.444-003
3.40	1.481-001	1.864-001	2.088-002	8.052-002	4.538-001	2.003-001	8.996-002	-6.493-002	4.377-002	7.739-003	-3.088-002	1.996-002
3.50	1.518-001	2.267-001	2.371-002	8.425-002	4.586-001	1.924-001	8.419-002	-7.031-002	4.665-002	-6.272-003	-2.559-002	3.571-002
3.60	1.591-001	2.724-001	2.703-002	8.794-002	4.629-001	1.846-001	7.780-002	-7.503-002	4.726-002	-2.080-002	-1.760-002	5.282-002
3.70	1.717-001	3.250-001	3.095-002	9.150-002	4.668-001	1.769-001	7.081-002	-7.905-002	4.545-002	-3.585-002	-6.011-003	7.138-002
3.80	1.922-001	3.864-001	3.557-002	9.485-002	4.701-001	1.693-001	6.325-002	-8.232-002	4.092-002	-5.137-002	1.046-002	9.139-002
3.90	2.248-001	4.590-001	4.103-002	9.781-002	4.731-001	1.618-001	5.508-002	-8.475-002	3.315-002	-6.748-002	3.375-002	1.126-001
4.00	2.767-001	5.454-001	4.752-002	1.001-001	4.756-001	1.545-001	4.623-002	-8.623-002	2.118-002	-8.412-002	6.679-002	1.343-001
4.50	1.625+000	6.075-001	8.477-002	6.532-002	4.843-001	1.166-001	-6.238-003	-5.395-002	-1.829-001	-6.558-002	5.038-001	-1.097-001
5.00	5.065-001	-7.370-001	4.295-002	8.716-002	4.689-001	8.708-002	2.514-002	-3.583-002	-7.517-003	7.531-002	-1.242-001	-2.657-001

Table A18b
Pressure Coefficients
$T = 0.2 \quad H = 1.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	4.519-010 -4.500-003	2.008-010 -2.000-003	5.523-010 -5.500-003	4.415-010 -4.500-003	2.001-010 -2.000-003	5.396-010 -5.500-003
0.05	2.814-007 -2.250-002	1.250-007 -9.993-003	3.436-007 -2.746-002	2.812-007 -2.249-002	1.249-007 -9.993-003	3.433-007 -2.749-002
0.10	4.454-006 -4.504-002	1.974-006 -1.995-002	5.422-006 -5.471-002	4.488-006 -4.493-002	1.990-006 -1.995-002	5.463-006 -5.494-002
0.15	2.214-005 -6.763-002	9.780-006 -2.983-002	2.681-005 -8.151-002	2.264-005 -6.728-002	1.000-005 -2.982-002	2.742-005 -8.229-002
0.20	6.816-005 -9.032-002	2.997-005 -3.959-002	8.199-005 -1.077-001	7.120-005 -8.947-002	3.131-005 -3.958-002	8.563-005 -1.095-001
0.30	3.195-004 -1.362-001	1.386-004 -5.868-002	3.767-004 -1.573-001	3.557-004 -1.332-001	1.543-004 -5.861-002	4.191-004 -1.634-001
0.40	8.993-004 -1.833-001	3.831-004 -7.704-002	1.032-003 -2.021-001	1.106-003 -1.759-001	4.708-004 -7.677-002	1.265-003 -2.164-001
0.50	1.857-003 -2.325-001	7.728-004 -9.458-002	2.061-003 -2.409-001	2.656-003 -2.173-001	1.102-003 -9.384-002	2.919-003 -2.684-001
0.60	3.001-003 -2.851-001	1.217-003 -1.113-001	3.223-003 -2.727-001	5.426-003 -2.571-001	2.179-003 -1.096-001	5.663-003 -3.196-001
0.70	3.678-003 -3.431-001	1.458-003 -1.274-001	3.901-003 -2.964-001	9.946-003 -2.952-001	3.839-003 -1.241-001	9.728-003 -3.700-001
0.80	2.391-003 -4.088-001	9.905-004 -1.429-001	3.030-003 -3.108-001	1.692-002 -3.317-001	6.221-003 -1.371-001	1.524-002 -4.200-001
0.90	-3.897-003 -4.858-001	-1.069-003 -1.581-001	-9.415-004 -3.142-001	2.729-002 -3.666-001	9.470-003 -1.486-001	2.218-002 -4.703-001
1.00	-2.109-002 -5.778-001	-6.171-003 -1.728-001	-9.894-003 -3.034-001	4.241-002 -4.007-001	1.373-002 -1.588-001	3.021-002 -5.214-001
1.10	-6.040-002 -6.884-001	-1.658-002 -1.864-001	-2.534-002 -2.730-001	6.408-002 -4.355-001	1.908-002 -1.681-001	3.849-002 -5.743-001
1.20	-1.420-001 -8.161-001	-3.545-002 -1.962-001	-4.607-002 -2.136-001	9.421-002 -4.747-001	2.538-002 -1.772-001	4.509-002 -6.298-001
1.30	-2.966-001 -9.419-001	-6.550-002 -1.958-001	-6.194-002 -1.121-001	1.327-001 -5.257-001	3.172-002 -1.870-001	4.639-002 -6.876-001
1.40	-5.463-001 -1.006+000	-1.035-001 -1.732-001	-4.394-002 3.846-002	1.715-001 -5.990-001	3.559-002 -1.982-001	3.772-002 -7.433-001
1.50	-8.424-001 -9.152-001	-1.313-001 -1.196-001	4.846-002 2.091-001	1.888-001 -6.961-001	3.336-002 -2.085-001	1.940-002 -7.867-001
1.60	-1.041+000 -6.601-001	-1.251-001 -4.998-002	2.110-001 3.301-001	1.670-001 -7.928-001	2.499-002 -2.119-001	3.697-003 -8.108-001
1.70	-1.062+000 -3.729-001	-8.812-002 5.490-003	3.754-001 3.708-001	1.204-001 -8.608-001	1.598-002 -2.055-001	3.108-003 -8.241-001
1.80	-9.703-001 -1.622-001	-4.302-002 3.703-002	4.925-001 3.670-001	7.468-002 -8.990-001	1.048-002 -1.920-001	1.634-002 -8.391-001
1.90	-8.475-001 -3.730-002	-3.972-003 5.267-002	5.621-001 3.577-001	4.040-002 -9.207-001	8.572-003 -1.746-001	3.621-002 -8.599-001
2.00	-7.324-001 3.023-002	2.605-002 6.123-002	5.992-001 3.589-001	1.672-002 -9.354-001	9.007-003 -1.548-001	5.782-002 -8.857-001
2.10	-6.350-001 6.522-002	4.820-002 6.769-002	6.156-001 3.731-001	2.669-004 -9.473-001	1.075-002 -1.326-001	7.898-002 -9.146-001
2.20	-5.547-001 8.290-002	6.422-002 7.428-002	6.180-001 3.983-001	-1.174-002 -9.578-001	1.323-002 -1.081-001	9.885-002 -9.451-001
2.30	-4.886-001 9.165-002	7.542-002 8.184-002	6.098-001 4.315-001	-2.115-002 -9.670-001	1.612-002 -8.077-002	1.171-001 -9.761-001
2.40	-4.338-001 9.611-002	8.274-002 9.066-002	5.927-001 4.702-001	-2.911-002 -9.745-001	1.933-002 -5.059-002	1.336-001 -1.007+000
2.50	-3.877-001 9.884-002	8.684-002 1.007-001	5.675-001 5.121-001	-3.627-002 -9.798-001	2.283-002 -1.742-002	1.482-001 -1.037+000
2.60	-3.487-001 1.013-001	8.811-002 1.120-001	5.347-001 5.550-001	-4.297-002 -9.824-001	2.666-002 1.880-002	1.608-001 -1.067+000
2.70	-3.155-001 1.045-001	8.685-002 1.242-001	4.945-001 5.975-001	-4.933-002 -9.818-001	3.091-002 5.812-002	1.714-001 -1.094+000
2.80	-2.870-001 1.089-001	8.331-002 1.373-001	4.474-001 6.379-001	-5.531-002 -9.776-001	3.568-002 1.006-001	1.798-001 -1.120+000
2.90	-2.627-001 1.151-001	7.770-002 1.511-001	3.935-001 6.751-001	-6.072-002 -9.692-001	4.111-002 1.460-001	1.859-001 -1.145+000
3.00	-2.419-001 1.235-001	7.024-002 1.654-001	3.334-001 7.078-001	-6.523-002 -9.563-001	4.736-002 1.944-001	1.897-001 -1.166+000
3.10	-2.244-001 1.345-001	6.114-002 1.802-001	2.674-001 7.350-001	-6.842-002 -9.385-001	5.460-002 2.456-001	1.912-001 -1.185+000
3.20	-2.097-001 1.485-001	5.063-002 1.952-001	1.961-001 7.559-001	-6.971-002 -9.155-001	6.305-002 2.994-001	1.902-001 -1.201+000
3.30	-1.976-001 1.661-001	3.898-002 2.104-001	1.203-001 7.696-001	-6.837-002 -8.869-001	7.292-002 3.554-001	1.868-001 -1.214+000
3.40	-1.878-001 1.880-001	2.649-002 2.257-001	4.067-002 7.754-001	-6.347-002 -8.526-001	8.447-002 4.134-001	1.811-001 -1.223+000
3.50	-1.800-001 2.152-001	1.353-002 2.411-001	-4.195-002 7.729-001	-5.383-002 -8.122-001	9.797-002 4.730-001	1.730-001 -1.229+000
3.60	-1.737-001 2.488-001	5.225-004 2.565-001	-1.267-001 7.615-001	-3.791-002 -7.658-001	1.137-001 5.335-001	1.626-001 -1.230+000
3.70	-1.680-001 2.907-001	-1.200-002 2.720-001	-2.125-001 7.409-001	-1.361-002 -7.132-001	1.321-001 5.945-001	1.500-001 -1.227+000
3.80	-1.619-001 3.433-001	-2.335-002 2.876-001	-2.986-001 7.109-001	2.193-002 -6.549-001	1.535-001 6.550-001	1.353-001 -1.220+000
3.90	-1.529-001 4.101-001	-3.253-002 3.035-001	-3.840-001 6.712-001	7.288-002 -5.918-001	1.784-001 7.140-001	1.186-001 -1.207+000
4.00	-1.366-001 4.963-001	-3.808-002 3.199-001	-4.680-001 6.218-001	1.455-001 -5.260-001	2.074-001 7.699-001	9.974-002 -1.189+000
4.50	9.053-001 1.131+000	1.205-001 2.990-001	-8.823-001 2.620-001	1.058+000 -9.346-001	3.562-001 8.398-001	-1.414-002 -9.703-001
5.00	7.096-001 -3.787-001	-1.115-001 1.999-002	-9.661-001 -1.081-001	-2.254-001 -1.016+000	1.542-001 1.114+000	4.393-002 -7.229-001

Table A19a
Impedance Coefficients
$T = 0.3 \quad H = 1.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	1.388-005	3.562-003	6.920-006	9.075-004	2.545-005	3.002-003	2.654-005	1.874-003	3.758-005	2.331-003	1.960-005	2.068-003
0.05	3.469-004	1.781-002	1.728-004	4.531-003	6.348-004	1.498-002	6.623-004	9.339-003	9.385-004	1.162-002	4.896-004	1.033-002
0.10	1.387-003	3.563-002	6.879-004	9.022-003	2.522-003	2.977-002	2.634-003	1.849-002	3.741-003	2.301-002	1.954-003	2.058-002
0.15	3.121-003	5.348-002	1.536-003	1.343-002	5.611-003	4.420-002	5.871-003	2.727-002	8.369-003	3.397-002	4.379-003	3.069-002
0.20	5.548-003	7.138-002	2.703-003	1.773-002	9.820-003	5.808-002	1.030-002	3.552-002	1.476-002	4.429-002	7.744-003	4.060-002
0.30	1.250-002	1.074-001	5.910-003	2.584-002	2.114-002	8.368-002	2.236-002	4.980-002	3.251-002	6.224-002	1.719-002	5.958-002
0.40	2.234-002	1.441-001	1.012-002	3.316-002	3.541-002	1.057-001	3.785-002	6.034-002	5.621-002	7.550-002	3.007-002	7.720-002
0.50	3.535-002	1.818-001	1.514-002	3.956-002	5.135-002	1.236-001	5.572-002	6.649-002	8.505-002	8.295-002	4.626-002	9.328-002
0.60	5.212-002	2.212-001	2.079-002	4.496-002	6.770-002	1.374-001	7.489-002	6.788-002	1.183-001	8.350-002	6.580-002	1.078-001
0.70	7.379-002	2.632-001	2.694-002	4.933-002	8.323-002	1.472-001	9.433-002	6.426-002	1.554-001	7.589-002	8.909-002	1.206-001
0.80	1.023-001	3.087-001	3.354-002	5.261-002	9.676-002	1.536-001	1.131-001	5.544-002	1.960-001	5.829-002	1.170-001	1.316-001
0.90	1.412-001	3.584-001	4.060-002	5.465-002	1.071-001	1.572-001	1.301-001	4.109-002	2.391-001	2.777-002	1.511-001	1.400-001
1.00	1.961-001	4.122-001	4.816-002	5.512-002	1.129-001	1.591-001	1.437-001	2.070-002	2.831-001	-2.048-002	1.936-001	1.441-001
1.10	2.765-001	4.673-001	5.616-002	5.334-002	1.125-001	1.614-001	1.514-001	-6.303-003	3.229-001	-9.389-002	2.479-001	1.394-001
1.20	3.962-001	5.121-001	6.403-002	4.810-002	1.045-001	1.679-001	1.484-001	-3.958-002	3.451-001	-2.020-001	3.161-001	1.163-001
1.30	5.672-001	5.156-001	6.966-002	3.782-002	8.955-002	1.860-001	1.271-001	-7.464-002	3.193-001	-3.485-001	3.932-001	5.668-002
1.40	7.698-001	4.193-001	6.812-002	2.275-002	7.731-002	2.250-001	8.159-002	-9.624-002	1.974-001	-5.027-001	4.505-001	-5.920-002
1.50	9.051-001	1.891-001	5.454-002	9.696-003	8.964-002	2.817-001	2.610-002	-8.099-002	-2.911-002	-5.689-001	4.317-001	-2.134-001
1.60	8.705-001	-7.534-002	3.415-002	8.899-003	1.361-001	3.278-001	-2.428-003	-3.161-002	-2.491-001	-4.774-001	3.235-001	-3.262-001
1.70	7.196-001	-2.387-001	1.857-002	1.947-002	1.935-001	3.433-001	7.742-003	1.612-002	-3.536-001	-3.056-001	1.958-001	-3.539-001
1.80	5.626-001	-2.925-001	1.105-002	3.328-002	2.406-001	3.374-001	3.603-002	4.240-002	-3.593-001	-1.535-001	1.014-001	-3.296-001
1.90	4.425-001	-2.878-001	8.778-003	4.585-002	2.745-001	3.240-001	6.538-002	5.036-002	-3.211-001	-4.844-002	4.297-002	-2.908-001
2.00	3.585-001	-2.607-001	9.017-003	5.646-002	2.989-001	3.098-001	8.994-002	4.744-002	-2.712-001	1.818-002	7.893-003	-2.535-001
2.10	3.005-001	-2.275-001	1.033-002	6.540-002	3.174-001	2.969-001	1.090-001	3.877-002	-2.221-001	5.900-002	-1.384-002	-2.217-001
2.20	2.597-001	-1.946-001	1.209-002	7.337-002	3.323-001	2.856-001	1.232-001	2.711-002	-1.777-001	8.319-002	-2.830-002	-1.953-001
2.30	2.302-001	-1.641-001	1.407-002	8.076-002	3.450-001	2.757-001	1.334-001	1.393-002	-1.387-001	9.640-002	-3.876-002	-1.730-001
2.40	2.082-001	-1.361-001	1.620-002	8.778-002	3.562-001	2.669-001	1.403-001	9.828-005	-1.048-001	1.022-001	-4.691-002	-1.537-001
2.50	1.911-001	-1.105-001	1.850-002	9.461-002	3.665-001	2.590-001	1.444-001	-1.388-002	-7.539-002	1.027-001	-5.371-002	-1.363-001
2.60	1.775-001	-8.672-002	2.103-002	1.014-001	3.761-001	2.516-001	1.461-001	-2.770-002	-5.001-002	9.949-002	-5.957-002	-1.200-001
2.70	1.661-001	-6.426-002	2.385-002	1.081-001	3.852-001	2.445-001	1.457-001	-4.114-002	-2.822-002	9.337-002	-6.467-002	-1.043-001
2.80	1.565-001	-4.258-002	2.705-002	1.149-001	3.938-001	2.377-001	1.434-001	-5.402-002	-9.714-003	8.507-002	-6.899-002	-8.874-002
2.90	1.481-001	-2.119-002	3.068-002	1.217-001	4.021-001	2.309-001	1.394-001	-6.622-002	5.763-003	7.510-002	-7.243-002	-7.289-002
3.00	1.407-001	3.928-004	3.484-002	1.285-001	4.099-001	2.242-001	1.339-001	-7.758-002	1.840-002	6.389-002	-7.479-002	-5.656-002
3.10	1.342-001	2.261-002	3.960-002	1.352-001	4.175-001	2.174-001	1.271-001	-8.799-002	2.833-002	5.177-002	-7.583-002	-3.958-002
3.20	1.287-001	4.589-002	4.501-002	1.418-001	4.246-001	2.104-001	1.190-001	-9.734-002	3.567-002	3.906-002	-7.526-002	-2.185-002
3.30	1.242-001	7.070-002	5.116-002	1.483-001	4.313-001	2.032-001	1.098-001	-1.055-001	4.053-002	2.604-002	-7.274-002	-3.350-003
3.40	1.209-001	9.746-002	5.810-002	1.544-001	4.376-001	1.959-001	9.962-002	-1.123-001	4.299-002	1.297-002	-6.789-002	1.588-002
3.50	1.192-001	1.267-001	6.588-002	1.601-001	4.434-001	1.883-001	8.870-002	-1.177-001	4.313-002	1.086-004	-6.028-002	3.574-002
3.60	1.195-001	1.589-001	7.452-002	1.651-001	4.487-001	1.806-001	7.717-002	-1.216-001	4.103-002	-1.230-002	-4.943-002	5.607-002
3.70	1.225-001	1.947-001	8.402-002	1.693-001	4.534-001	1.727-001	6.526-002	-1.239-001	3.678-002	-2.404-002	-3.476-002	7.659-002
3.80	1.290-001	2.349-001	9.436-002	1.726-001	4.575-001	1.646-001	5.317-002	-1.245-001	3.046-002	-3.486-002	-1.560-002	9.694-002
3.90	1.403-001	2.803-001	1.055-001	1.745-001	4.610-001	1.564-001	4.115-002	-1.233-001	2.212-002	-4.458-002	8.889-003	1.166-001
4.00	1.584-001	3.322-001	1.173-001	1.749-001	4.637-001	1.482-001	2.943-002	-1.205-001	1.178-002	-5.297-002	3.980-002	1.349-001
4.50	5.539-001	7.196-001	1.770-001	1.363-001	4.673-001	1.091-001	-1.628-002	-7.937-002	-7.770-002	-5.867-002	3.650-001	1.140-001
5.00	1.235+000	-6.846-001	8.693-002	1.100-001	4.533-001	8.088-002	2.193-002	-3.879-002	-2.565-002	1.075-001	-3.538-002	-6.203-001

Table A19b
Pressure Coefficients
$T = 0.3 \quad H = 1.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	6.393-010 -4.250-003	4.513-010 -3.000-003	8.649-010 -5.750-003	6.291-010 -4.250-003	4.498-010 -3.000-003	8.511-010 -5.750-003
0.05	3.984-007 -2.125-002	2.810-007 -1.499-002	5.384-007 -2.871-002	3.980-007 -2.124-002	2.807-007 -1.499-002	5.378-007 -2.874-002
0.10	6.314-006 -4.253-002	4.444-006 -2.991-002	8.505-006 -5.715-002	6.350-006 -4.242-002	4.469-006 -2.990-002	8.553-006 -5.742-002
0.15	3.147-005 -6.387-002	2.207-005 -4.470-002	4.215-005 -8.508-002	3.201-005 -6.347-002	2.244-005 -4.468-002	4.287-005 -8.597-002
0.20	9.727-005 -8.530-002	6.786-005 -5.931-002	1.293-004 -1.122-001	1.006-004 -8.433-002	7.015-005 -5.924-002	1.336-004 -1.143-001
0.30	4.618-004 -1.287-001	3.175-004 -8.776-002	6.005-004 -1.634-001	5.011-004 -1.253-001	3.445-004 -8.748-002	6.511-004 -1.704-001
0.40	1.330-003 -1.733-001	8.958-004 -1.150-001	1.677-003 -2.090-001	1.554-003 -1.649-001	1.046-003 -1.142-001	1.954-003 -2.254-001
0.50	2.857-003 -2.201-001	1.875-003 -1.409-001	3.468-003 -2.477-001	3.721-003 -2.028-001	2.435-003 -1.390-001	4.478-003 -2.792-001
0.60	4.972-003 -2.707-001	3.162-003 -1.656-001	5.777-003 -2.784-001	7.586-003 -2.388-001	4.791-003 -1.616-001	8.626-003 -3.320-001
0.70	7.143-003 -3.271-001	4.394-003 -1.893-001	7.975-003 -3.000-001	1.390-002 -2.727-001	8.405-003 -1.819-001	1.471-002 -3.843-001
0.80	7.988-003 -3.922-001	4.796-003 -2.124-001	8.915-003 -3.114-001	2.370-002 -3.044-001	1.358-002 -1.997-001	2.288-002 -4.366-001
0.90	4.507-003 -4.701-001	2.973-003 -2.353-001	6.907-003 -3.107-001	3.844-002 -3.342-001	2.066-002 -2.153-001	3.307-002 -4.898-001
1.00	-9.493-003 -5.659-001	-3.459-003 -2.580-001	-1.058-004 -2.945-001	6.035-002 -3.627-001	3.002-002 -2.289-001	4.474-002 -5.450-001
1.10	-4.654-002 -6.847-001	-1.841-002 -2.798-001	-1.375-002 -2.569-001	9.263-002 -3.924-001	4.198-002 -2.415-001	5.652-002 -6.035-001
1.20	-1.309-001 -8.272-001	-4.771-002 -2.967-001	-3.235-002 -1.872-001	1.392-001 -4.290-001	5.640-002 -2.548-001	6.527-002 -6.669-001
1.30	-3.022-001 -9.720-001	-9.708-002 -2.972-001	-4.295-002 -7.039-002	2.010-001 -4.857-001	7.124-002 -2.718-001	6.486-002 -7.342-001
1.40	-5.917-001 -1.042+000	-1.609-001 -2.587-001	-8.543-003 9.847-002	2.639-001 -5.827-001	7.987-002 -2.946-001	4.770-002 -7.974-001
1.50	-9.277-001 -9.154-001	-2.028-001 -1.655-001	1.161-001 2.737-001	2.866-001 -7.217-001	7.250-002 -3.164-001	1.724-002 -8.378-001
1.60	-1.118+000 -6.054-001	-1.816-001 -5.288-002	3.033-001 3.705-001	2.409-001 -8.535-001	5.095-002 -3.211-001	-1.864-003 -8.486-001
1.70	-1.100+000 -2.976-001	-1.143-001 2.626-002	4.626-001 3.806-001	1.620-001 -9.327-001	3.083-002 -3.043-001	6.420-003 -8.508-001
1.80	-9.799-001 -9.672-002	-4.301-002 6.580-002	5.580-001 3.617-001	9.243-002 -9.682-001	2.026-002 -2.747-001	3.303-002 -8.622-001
1.90	-8.457-001 1.188-002	1.433-002 8.385-002	6.051-001 3.510-001	4.259-002 -9.838-001	1.764-002 -2.394-001	6.568-002 -8.852-001
2.00	-7.288-001 6.595-002	5.679-002 9.409-002	6.234-001 3.573-001	8.033-003 -9.929-001	1.973-002 -2.007-001	9.837-002 -9.163-001
2.10	-6.334-001 9.133-002	8.745-002 1.030-001	6.243-001 3.785-001	-1.707-002 -1.000+000	2.447-002 -1.586-001	1.290-001 -9.522-001
2.20	-5.563-001 1.022-001	1.094-001 1.131-001	6.133-001 4.105-001	-3.680-002 -1.007+000	3.083-002 -1.124-001	1.569-001 -9.910-001
2.30	-4.935-001 1.058-001	1.246-001 1.251-001	5.928-001 4.497-001	-5.363-002 -1.012+000	3.840-002 -6.144-002	1.819-001 -1.031+000
2.40	-4.416-001 1.062-001	1.342-001 1.394-001	5.639-001 4.929-001	-6.901-002 -1.016+000	4.710-002 -5.635-003	2.038-001 -1.073+000
2.50	-3.982-001 1.053-001	1.391-001 1.556-001	5.272-001 5.377-001	-8.367-002 -1.017+000	5.705-002 5.531-002	2.224-001 -1.114+000
2.60	-3.614-001 1.043-001	1.401-001 1.738-001	4.828-001 5.819-001	-9.791-002 -1.015+000	6.848-002 1.215-001	2.376-001 -1.154+000
2.70	-3.300-001 1.041-001	1.374-001 1.934-001	4.312-001 6.237-001	-1.117-001 -1.008+000	8.168-002 1.929-001	2.491-001 -1.194+000
2.80	-3.031-001 1.051-001	1.316-001 2.144-001	3.726-001 6.617-001	-1.248-001 -9.971-001	9.701-002 2.693-001	2.567-001 -1.231+000
2.90	-2.799-001 1.076-001	1.228-001 2.364-001	3.074-001 6.945-001	-1.366-001 -9.805-001	1.148-001 3.505-001	2.603-001 -1.267+000
3.00	-2.601-001 1.120-001	1.116-001 2.592-001	2.360-001 7.210-001	-1.466-001 -9.581-001	1.355-001 4.361-001	2.598-001 -1.299+000
3.10	-2.430-001 1.185-001	9.821-002 2.824-001	1.592-001 7.403-001	-1.539-001 -9.298-001	1.595-001 5.254-001	2.552-001 -1.328+000
3.20	-2.285-001 1.276-001	8.311-002 3.059-001	7.770-002 7.514-001	-1.576-001 -8.952-001	1.872-001 6.178-001	2.464-001 -1.353+000
3.30	-2.161-001 1.395-001	6.673-002 3.293-001	-7.716-003 7.539-001	-1.566-001 -8.547-001	2.188-001 7.124-001	2.337-001 -1.373+000
3.40	-2.055-001 1.545-001	4.954-002 3.523-001	-9.608-002 7.471-001	-1.499-001 -8.083-001	2.547-001 8.081-001	2.172-001 -1.388+000
3.50	-1.963-001 1.733-001	3.208-002 3.747-001	-1.863-001 7.309-001	-1.360-001 -7.565-001	2.950-001 9.037-001	1.973-001 -1.396+000
3.60	-1.883-001 1.961-001	1.488-002 3.960-001	-2.772-001 7.051-001	-1.136-001 -7.002-001	3.396-001 9.979-001	1.746-001 -1.398+000
3.70	-1.809-001 2.237-001	-1.466-003 4.160-001	-3.677-001 6.696-001	-8.120-002 -6.402-001	3.885-001 1.089+000	1.495-001 -1.393+000
3.80	-1.735-001 2.570-001	-1.633-002 4.343-001	-4.565-001 6.248-001	-3.719-002 -5.781-001	4.411-001 1.175+000	1.228-001 -1.380+000
3.90	-1.655-001 2.969-001	-2.901-002 4.506-001	-5.424-001 5.708-001	2.034-002 -5.154-001	4.968-001 1.255+000	9.543-002 -1.360+000
4.00	-1.557-001 3.450-001	-3.869-002 4.645-001	-6.240-001 5.081-001	9.364-002 -4.547-001	5.546-001 1.326+000	6.810-002 -1.331+000
4.50	6.871-002 8.170-001	1.277-002 4.738-001	-9.344-001 8.965-002	8.301-001 -4.051-001	8.056-001 1.468+000	-3.848-002 -1.076+000
5.00	1.273+000 -1.899-002	-3.927-002 -4.027-002	-9.506-001 -3.314-001	-7.618-002 -1.715+000	3.382-001 1.630+000	4.143-002 -7.639-001

Table A20a
Impedance Coefficients
$T = 0.5 \quad H = 1.0$

ka	Z_1		Z_2		Z_3		Z_1'		Z_2'		Z_3'	
0.01	9.350-006	2.802-003	1.667-005	1.992-003	2.603-005	2.905-003	4.167-005	2.692-003	3.120-005	1.770-003	2.497-005	2.566-003
0.05	2.337-004	1.401-002	4.160-004	9.942-003	6.491-004	1.449-002	1.039-003	1.341-002	7.789-004	8.815-003	6.236-004	1.281-002
0.10	9.340-004	2.804-002	1.654-003	1.978-002	2.575-003	2.877-002	4.128-003	2.649-002	3.101-003	1.743-002	2.486-003	2.553-002
0.15	2.099-003	4.211-002	3.687-003	2.941-002	5.712-003	4.264-002	9.178-003	3.894-002	6.925-003	2.563-002	5.563-003	3.805-002
0.20	3.726-003	5.624-002	6.469-003	3.873-002	9.961-003	5.592-002	1.605-002	5.047-002	1.218-002	3.325-002	9.819-003	5.030-002
0.30	8.366-003	8.483-002	1.404-002	5.619-002	2.123-002	8.011-002	3.453-002	6.984-002	2.665-002	4.608-002	2.168-002	7.372-002
0.40	1.490-002	1.142-001	2.384-002	7.169-002	3.510-002	1.005-001	5.783-002	8.312-002	4.570-002	5.478-002	3.769-002	9.545-002
0.50	2.353-002	1.448-001	3.531-002	8.501-002	5.016-002	1.169-001	8.407-002	8.949-002	6.852-002	5.850-002	5.764-002	1.154-001
0.60	3.471-002	1.774-001	4.802-002	9.613-002	6.508-002	1.293-001	1.115-001	8.867-002	9.446-002	5.645-002	8.160-002	1.339-001
0.70	4.934-002	2.130-001	6.173-002	1.051-001	7.870-002	1.383-001	1.385-001	8.059-002	1.230-001	4.769-002	1.102-001	1.510-001
0.80	6.908-002	2.528-001	7.638-002	1.119-001	9.003-002	1.447-001	1.639-001	6.521-002	1.539-001	3.073-002	1.450-001	1.669-001
0.90	9.686-002	2.980-001	9.219-002	1.163-001	9.816-002	1.493-001	1.860-001	4.227-002	1.865-001	3.058-003	1.883-001	1.812-001
1.00	1.379-001	3.498-001	1.095-001	1.175-001	1.022-001	1.536-001	2.027-001	1.112-002	2.192-001	-3.957-002	2.445-001	1.918-001
1.10	2.015-001	4.071-001	1.286-001	1.140-001	1.010-001	1.596-001	2.102-001	-2.896-002	2.475-001	-1.039-001	3.195-001	1.931-001
1.20	3.030-001	4.623-001	1.488-001	1.024-001	9.441-002	1.712-001	2.014-001	-7.731-002	2.588-001	-1.987-001	4.202-001	1.711-001
1.30	4.606-001	4.875-001	1.653-001	7.757-002	8.479-002	1.949-001	1.644-001	-1.264-001	2.235-001	-3.271-001	5.442-001	9.534-002
1.40	6.655-001	4.188-001	1.647-001	3.896-002	8.392-002	2.371-001	9.141-002	-1.504-001	9.421-002	-4.555-001	6.489-001	-7.577-002
1.50	8.164-001	2.055-001	1.310-001	2.027-003	1.121-001	2.873-001	1.131-002	-1.124-001	-1.276-001	-4.824-001	6.320-001	-3.222-001
1.60	7.950-001	-5.067-002	7.871-002	-3.648-004	1.666-001	3.142-001	-1.362-002	-2.930-002	-3.122-001	-3.552-001	4.635-001	-5.029-001
1.70	6.597-001	-2.064-001	4.081-002	2.679-002	2.173-001	3.108-001	2.001-002	3.482-002	-3.690-001	-1.797-001	2.671-001	-5.454-001
1.80	5.218-001	-2.598-001	2.396-002	6.090-002	2.511-001	2.953-001	7.069-002	5.971-002	-3.425-001	-4.563-002	1.252-001	-5.105-001
1.90	4.182-001	-2.620-001	1.989-002	9.148-002	2.721-001	2.796-001	1.153-001	5.817-002	-2.887-001	3.829-002	3.625-002	-4.563-001
2.00	3.460-001	-2.457-001	2.198-002	1.174-001	2.863-001	2.672-001	1.491-001	4.301-002	-2.325-001	8.754-002	-1.993-002	-4.045-001
2.10	2.955-001	-2.245-001	2.709-002	1.398-001	2.972-001	2.580-001	1.730-001	2.134-002	-1.813-001	1.153-001	-5.796-002	-3.599-001
2.20	2.590-001	-2.035-001	3.396-002	1.598-001	3.066-001	2.512-001	1.886-001	-3.244-003	-1.364-001	1.295-001	-8.596-002	-3.215-001
2.30	2.315-001	-1.844-001	4.218-002	1.781-001	3.155-001	2.462-001	1.975-001	-2.890-002	-9.727-002	1.347-001	-1.082-001	-2.875-001
2.40	2.096-001	-1.674-001	5.174-002	1.955-001	3.244-001	2.423-001	2.005-001	-5.462-002	-6.339-002	1.337-001	-1.268-001	-2.562-001
2.50	1.914-001	-1.520-001	6.270-002	2.120-001	3.336-001	2.390-001	1.986-001	-7.955-002	-3.419-002	1.279-001	-1.427-001	-2.262-001
2.60	1.756-001	-1.378-001	7.516-002	2.275-001	3.431-001	2.359-001	1.922-001	-1.031-001	-9.352-003	1.185-001	-1.561-001	-1.967-001
2.70	1.612-001	-1.242-001	8.918-002	2.419-001	3.530-001	2.326-001	1.819-001	-1.246-001	1.133-002	1.064-001	-1.668-001	-1.670-001
2.80	1.480-001	-1.109-001	1.048-001	2.550-001	3.631-001	2.289-001	1.693-001	-1.438-001	2.797-002	9.232-002	-1.745-001	-1.369-001
2.90	1.356-001	-9.735-002	1.218-001	2.666-001	3.733-001	2.246-001	1.520-001	-1.601-001	4.066-002	7.688-002	-1.790-001	-1.064-001
3.00	1.240-001	-8.325-002	1.402-001	2.764-001	3.834-001	2.196-001	1.334-001	-1.732-001	4.953-002	6.078-002	-1.798-001	-7.589-002
3.10	1.133-001	-6.838-002	1.597-001	2.841-001	3.934-001	2.137-001	1.133-001	-1.829-001	5.477-002	4.466-002	-1.767-001	-4.568-002
3.20	1.037-001	-5.262-002	1.801-001	2.896-001	4.028-001	2.070-001	9.236-002	-1.891-001	5.666-002	2.910-002	-1.697-001	-1.635-002
3.30	9.518-002	-3.591-002	2.010-001	2.926-001	4.117-001	1.994-001	7.118-002	-1.917-001	5.556-002	1.465-002	-1.588-001	1.150-002
3.40	8.798-002	-1.827-002	2.220-001	2.931-001	4.197-001	1.912-001	5.044-002	-1.908-001	5.189-002	1.759-003	-1.441-001	3.728-002
3.50	8.219-002	2.398-004	2.428-001	2.911-001	4.268-001	1.823-001	3.074-002	-1.868-001	4.617-002	-9.250-003	-1.261-001	6.044-002
3.60	7.786-002	1.955-002	2.629-001	2.866-001	4.328-001	1.730-001	1.266-002	-1.799-001	3.892-002	-1.815-002	-1.051-001	8.053-002
3.70	7.500-002	3.959-002	2.819-001	2.797-001	4.377-001	1.634-001	-3.380-003	-1.705-001	3.068-002	-2.487-002	-8.168-002	9.720-002
3.80	7.359-002	6.037-002	2.995-001	2.707-001	4.415-001	1.538-001	-1.703-002	-1.593-001	2.196-002	-2.942-002	-5.640-002	1.103-001
3.90	7.361-002	8.192-002	3.154-001	2.599-001	4.441-001	1.442-001	-2.812-002	-1.468-001	1.320-002	-3.196-002	-2.977-002	1.197-001
4.00	7.502-002	1.044-001	3.292-001	2.476-001	4.457-001	1.350-001	-3.656-002	-1.335-001	4.754-003	-3.270-002	-2.225-003	1.255-001
4.50	1.074-001	2.435-001	3.664-001	1.748-001	4.423-001	9.668-002	-4.501-002	-7.179-002	-2.662-002	-1.873-002	1.441-001	1.049-001
5.00	2.832-001	5.174-001	3.471-001	1.002-001	4.300-001	7.315-002	-2.118-002	-3.552-002	-4.273-002	1.149-002	3.423-001	-4.734-002

Table A20b
Pressure Coefficients
$T = 0.5 \quad H = 1.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	9.385-010 -3.750-003	1.251-009 -5.000-003	1.564-009 -6.250-003	9.306-010 -3.750-003	1.250-009 -5.000-003	1.551-009 -6.250-003
0.05	5.849-007 -1.875-002	7.793-007 -2.498-002	9.737-007 -3.119-002	5.854-007 -1.874-002	7.799-007 -2.497-002	9.745-007 -3.123-002
0.10	9.277-006 -3.752-002	1.233-005 -4.982-002	1.538-005 -6.204-002	9.332-006 -3.739-002	1.240-005 -4.979-002	1.548-005 -6.237-002
0.15	4.629-005 -5.633-002	6.126-005 -7.438-002	7.627-005 -9.219-002	4.697-005 -5.588-002	6.216-005 -7.429-002	7.739-005 -9.333-002
0.20	1.433-004 -7.522-002	1.886-004 -9.857-002	2.341-004 -1.213-001	1.473-004 -7.412-002	1.938-004 -9.834-002	2.405-004 -1.240-001
0.30	6.851-004 -1.134-001	8.866-004 -1.454-001	1.091-003 -1.755-001	7.300-004 -1.096-001	9.444-004 -1.445-001	1.161-003 -1.844-001
0.40	1.999-003 -1.528-001	2.527-003 -1.898-001	3.072-003 -2.224-001	2.250-003 -1.433-001	2.842-003 -1.875-001	3.448-003 -2.434-001
0.50	4.402-003 -1.944-001	5.400-003 -2.317-001	6.463-003 -2.607-001	5.355-003 -1.748-001	6.552-003 -2.265-001	7.801-003 -3.009-001
0.60	8.010-003 -2.399-001	9.472-003 -2.713-001	1.114-002 -2.890-001	1.087-002 -2.038-001	1.277-002 -2.610-001	1.483-002 -3.576-001
0.70	1.253-002 -2.915-001	1.421-002 -3.093-001	1.644-002 -3.064-001	1.987-002 -2.300-001	2.222-002 -2.909-001	2.495-002 -4.141-001
0.80	1.691-002 -3.525-001	1.835-002 -3.465-001	2.110-002 -3.115-001	3.392-002 -2.530-001	3.569-002 -3.161-001	3.830-002 -4.715-001
0.90	1.858-002 -4.274-001	1.954-002 -3.839-001	2.328-002 -3.024-001	5.537-002 -2.730-001	5.414-002 -3.369-001	5.461-002 -5.313-001
1.00	1.179-002 -5.225-001	1.364-002 -4.223-001	2.087-002 -2.757-001	8.802-002 -2.906-001	7.876-002 -3.543-001	7.289-002 -5.953-001
1.10	-1.598-002 -6.455-001	-6.471-003 -4.610-001	1.239-002 -2.251-001	1.379-001 -3.088-001	1.109-001 -3.706-001	9.066-002 -6.659-001
1.20	-9.130-002 -8.011-001	-5.225-002 -4.943-001	3.247-004 -1.394-001	2.138-001 -3.366-001	1.512-001 -3.911-001	1.024-001 -7.451-001
1.30	-2.631-001 -9.715-001	-1.372-001 -5.022-001	5.906-004 -3.263-003	3.214-001 -3.978-001	1.951-001 -4.259-001	9.704-002 -8.311-001
1.40	-5.797-001 -1.069+000	-2.547-001 -4.389-001	5.715-002 1.839-001	4.393-001 -5.348-001	2.228-001 -4.839-001	6.183-002 -9.070-001
1.50	-9.617-001 -9.350-001	-3.323-001 -2.691-001	2.152-001 3.575-001	4.848-001 -7.589-001	2.009-001 -5.457-001	8.662-003 -9.382-001
1.60	-1.167+000 -5.879-001	-2.866-001 -6.723-002	4.172-001 4.233-001	3.990-001 -9.716-001	1.355-001 -5.580-001	-1.172-002 -9.219-001
1.70	-1.135+000 -2.613-001	-1.616-001 6.411-002	5.564-001 4.047-001	2.556-001 -1.087+000	7.818-002 -5.097-001	1.920-002 -9.057-001
1.80	-1.004+000 -6.099-002	-3.794-002 1.246-001	6.179-001 3.770-001	1.320-001 -1.128+000	5.067-002 -4.307-001	7.482-002 -9.160-001
1.90	-8.672-001 4.259-002	5.776-002 1.513-001	6.323-001 3.706-001	4.155-002 -1.139+000	4.611-002 -3.405-001	1.338-001 -9.493-001
2.00	-7.523-001 9.269-002	1.275-001 1.674-001	6.217-001 3.858-001	-2.569-002 -1.142+000	5.550-002 -2.439-001	1.883-001 -9.976-001
2.10	-6.602-001 1.156-001	1.777-001 1.826-001	5.964-001 4.164-001	-7.976-002 -1.143+000	7.402-002 -1.404-001	2.364-001 -1.055+000
2.20	-5.865-001 1.247-001	2.135-001 2.005-001	5.605-001 4.562-001	-1.271-001 -1.141+000	9.987-002 -2.907-002	2.775-001 -1.119+000
2.30	-5.267-001 1.270-001	2.384-001 2.220-001	5.157-001 5.006-001	-1.712-001 -1.138+000	1.328-001 9.115-002	3.110-001 -1.187+000
2.40	-4.773-001 1.259-001	2.546-001 2.471-001	4.628-001 5.459-001	-2.137-001 -1.129+000	1.736-001 2.213-001	3.365-001 -1.257+000
2.50	-4.360-001 1.234-001	2.634-001 2.756-001	4.020-001 5.893-001	-2.549-001 -1.114+000	2.231-001 3.602-001	3.534-001 -1.328+000
2.60	-4.010-001 1.205-001	2.662-001 3.070-001	3.337-001 6.285-001	-2.942-001 -1.092+000	2.825-001 5.071-001	3.612-001 -1.398+000
2.70	-3.709-001 1.180-001	2.635-001 3.409-001	2.584-001 6.616-001	-3.305-001 -1.062+000	3.524-001 6.602-001	3.595-001 -1.466+000
2.80	-3.450-001 1.164-001	2.563-001 3.766-001	1.767-001 6.870-001	-3.621-001 -1.022+000	4.336-001 8.176-001	3.483-001 -1.530+000
2.90	-3.223-001 1.159-001	2.453-001 4.135-001	8.915-002 7.035-001	-3.873-001 -9.739-001	5.260-001 9.764-001	3.280-001 -1.587+000
3.00	-3.022-001 1.169-001	2.313-001 4.508-001	-3.203-003 7.102-001	-4.043-001 -9.178-001	6.293-001 1.134+000	2.993-001 -1.636+000
3.10	-2.843-001 1.195-001	2.149-001 4.878-001	-9.930-002 7.065-001	-4.116-001 -8.552-001	7.426-001 1.289+000	2.633-001 -1.675+000
3.20	-2.679-001 1.238-001	1.969-001 5.236-001	-1.979-001 6.920-001	-4.078-001 -7.880-001	8.641-001 1.436+000	2.214-001 -1.703+000
3.30	-2.526-001 1.298-001	1.776-001 5.573-001	-2.975-001 6.666-001	-3.923-001 -7.182-001	9.918-001 1.574+000	1.754-001 -1.719+000
3.40	-2.381-001 1.375-001	1.578-001 5.879-001	-3.965-001 6.303-001	-3.648-001 -6.482-001	1.123+000 1.702+000	1.273-001 -1.722+000
3.50	-2.240-001 1.467-001	1.376-001 6.147-001	-4.933-001 5.835-001	-3.258-001 -5.805-001	1.254+000 1.816+000	7.915-002 -1.712+000
3.60	-2.102-001 1.572-001	1.174-001 6.369-001	-5.859-001 5.266-001	-2.763-001 -5.172-001	1.383+000 1.916+000	3.301-002 -1.690+000
3.70	-1.966-001 1.689-001	9.724-002 6.537-001	-6.727-001 4.602-001	-2.176-001 -4.602-001	1.504+000 2.002+000	-9.280-003 -1.656+000
3.80	-1.832-001 1.816-001	7.733-002 6.646-001	-7.519-001 3.850-001	-1.516-001 -4.108-001	1.616+000 2.074+000	-4.618-002 -1.612+000
3.90	-1.701-001 1.954-001	5.775-002 6.694-001	-8.217-001 3.018-001	-8.006-002 -3.700-001	1.714+000 2.134+000	-7.659-002 -1.560+000
4.00	-1.576-001 2.102-001	3.855-002 6.679-001	-8.806-001 2.116-001	-4.959-003 -3.382-001	1.796+000 2.183+000	-9.988-002 -1.501+000
4.50	-1.079-001 3.165-001	-4.124-002 5.707-001	-9.741-001 -3.041-001	3.809-001 -3.078-001	1.924+000 2.331+000	-1.183-001 -1.161+000
5.00	-3.548-002 6.141-001	-2.529-002 3.358-001	-7.065-001 -7.884-001	7.713-001 -5.588-001	1.558+000 2.452+000	-4.842-002 -8.281-001

Table A21a
Impedance Coefficients
$T = 0.05 \quad H = 2.0$

ka	Z_1		Z_2		Z_3		Z_1'		Z_2'		Z_3'	
0.01	4.738-005	1.086-002	1.225-007	2.038-005	5.097-005	4.989-003	4.998-006	3.100-004	9.829-005	5.508-003	4.819-006	4.845-004
0.05	1.186-003	5.437-002	3.059-006	1.018-004	1.272-003	2.489-002	1.247-004	1.544-003	2.457-003	2.746-002	1.205-004	2.422-003
0.10	4.769-003	1.091-001	1.219-005	2.029-004	5.056-003	4.940-002	4.966-004	3.053-003	9.822-003	5.444-002	4.822-004	4.838-003
0.15	1.082-002	1.647-001	2.726-005	3.027-004	1.126-002	7.318-002	1.108-003	4.491-003	2.208-002	8.046-002	1.086-003	7.244-003
0.20	1.947-002	2.216-001	4.807-005	4.007-004	1.975-002	9.588-002	1.949-003	5.825-003	3.922-002	1.050-001	1.935-003	9.637-003
0.30	4.555-002	3.416-001	1.059-004	5.889-004	4.275-002	1.368-001	4.253-003	8.061-003	8.822-002	1.480-001	4.392-003	1.439-002
0.40	8.634-002	4.748-001	1.836-004	7.646-004	7.206-002	1.702-001	7.268-003	9.544-003	1.575-001	1.796-001	7.963-003	1.916-002
0.50	1.492-001	6.309-001	2.808-004	9.262-004	1.052-001	1.942-001	1.085-002	1.008-002	2.496-001	1.946-001	1.294-002	2.408-002
0.60	2.510-001	8.248-001	4.009-004	1.072-003	1.394-001	2.075-001	1.487-002	9.426-003	3.707-001	1.845-001	2.005-002	2.936-002
0.70	4.333-001	1.080+000	5.563-004	1.198-003	1.704-001	2.081-001	1.924-002	7.145-003	5.330-001	1.289-001	3.103-002	3.516-002
0.80	8.129-001	1.424+000	7.791-004	1.278-003	1.894-001	1.933-001	2.366-002	2.123-003	7.544-001	-3.071-002	5.023-002	4.047-002
0.90	1.740+000	1.740+000	1.113-003	1.190-003	1.710-001	1.663-001	2.581-002	-8.462-003	9.942-001	-4.806-001	8.784-002	3.559-002
1.00	3.469+000	7.279-001	1.247-003	5.620-004	7.884-002	2.093-001	1.256-002	-2.263-002	5.955-001	-1.424+000	1.311-001	-2.865-002
1.10	2.678+000	-1.648+000	4.018-004	3.377-004	1.290-001	3.737-001	-5.605-003	-9.073-003	-6.478-001	-1.154+000	6.452-002	-9.864-002
1.20	1.196+000	-1.715+000	5.001-005	8.475-004	2.550-001	3.934-001	-3.058-004	3.197-003	-7.441-001	-4.033-001	1.187-002	-7.739-002
1.30	6.091-001	-1.324+000	3.161-005	1.213-003	3.260-001	3.674-001	5.934-003	5.479-003	-5.567-001	-9.096-002	-2.493-003	-5.504-002
1.40	3.709-001	-1.024+000	6.625-005	1.464-003	3.695-001	3.400-001	9.757-003	4.765-003	-3.996-001	3.271-002	-6.489-003	-4.152-002
1.50	2.583-001	-8.147-001	1.052-004	1.666-003	4.004-001	3.150-001	1.193-002	3.235-003	-2.853-001	8.381-002	-7.821-003	-3.306-002
1.60	1.976-001	-6.636-001	1.436-004	1.846-003	4.238-001	2.920-001	1.303-002	1.545-003	-2.018-001	1.027-001	-8.465-003	-2.730-002
1.70	1.613-001	-5.495-001	1.838-004	2.017-003	4.420-001	2.704-001	1.341-002	-5.356-005	-1.399-001	1.055-001	-8.982-003	-2.301-002
1.80	1.372-001	-4.596-001	2.290-004	2.182-003	4.560-001	2.501-001	1.327-002	-1.443-003	-9.369-002	9.979-002	-9.517-003	-1.952-002
1.90	1.197-001	-3.856-001	2.816-004	2.342-003	4.667-001	2.309-001	1.279-002	-2.567-003	-5.925-002	8.966-002	-1.007-002	-1.644-002
2.00	1.058-001	-3.225-001	3.431-004	2.497-003	4.744-001	2.129-001	1.210-002	-3.402-003	-3.391-002	7.751-002	-1.061-002	-1.356-002
2.10	9.404-002	-2.666-001	4.135-004	2.643-003	4.796-001	1.963-001	1.128-002	-3.949-003	-1.562-002	6.493-002	-1.105-002	-1.074-002
2.20	8.356-002	-2.154-001	4.917-004	2.779-003	4.827-001	1.811-001	1.044-002	-4.224-003	-2.879-003	5.285-002	-1.135-002	-7.924-003
2.30	7.397-002	-1.672-001	5.754-004	2.902-003	4.840-001	1.674-001	9.625-003	-4.261-003	5.661-003	4.198-002	-1.144-002	-5.083-003
2.40	6.511-002	-1.204-001	6.613-004	3.011-003	4.839-001	1.553-001	8.901-003	-4.099-003	1.109-002	3.268-002	-1.127-002	-2.223-003
2.50	5.697-002	-7.401-002	7.456-004	3.106-003	4.826-001	1.448-001	8.293-003	-3.778-003	1.436-002	2.510-002	-1.082-002	6.373-004
2.60	4.957-002	-2.703-002	8.243-004	3.186-003	4.805-001	1.358-001	7.825-003	-3.343-003	1.632-002	1.928-002	-1.005-002	3.468-003
2.70	4.300-002	2.144-002	8.937-004	3.259-003	4.779-001	1.283-001	7.499-003	-2.839-003	1.766-002	1.511-002	-8.972-003	6.234-003
2.80	3.737-002	7.229-002	9.512-004	3.323-003	4.750-001	1.222-001	7.317-003	-2.290-003	1.897-002	1.233-002	-7.576-003	8.906-003
2.90	3.280-002	1.266-001	9.957-004	3.387-003	4.720-001	1.174-001	7.277-003	-1.722-003	2.071-002	1.064-002	-5.881-003	1.146-002
3.00	2.947-002	1.855-001	1.028-003	3.454-003	4.691-001	1.139-001	7.376-003	-1.156-003	2.323-002	9.679-003	-3.907-003	1.389-002
3.10	2.757-002	2.509-001	1.052-003	3.530-003	4.665-001	1.114-001	7.620-003	-6.077-004	2.683-002	9.043-003	-1.678-003	1.620-002
3.20	2.743-002	3.249-001	1.072-003	3.617-003	4.642-001	1.098-001	8.017-003	-1.171-004	3.179-002	8.334-003	7.903-004	1.846-002
3.30	2.954-002	4.111-001	1.094-003	3.717-003	4.625-001	1.091-001	8.577-003	3.220-004	3.838-002	7.159-003	3.506-003	2.070-002
3.40	3.478-002	5.147-001	1.125-003	3.829-003	4.614-001	1.090-001	9.296-003	6.188-004	4.688-002	4.984-003	6.528-003	2.314-002
3.50	4.479-002	6.449-001	1.169-003	3.949-003	4.609-001	1.092-001	1.016-002	7.307-004	5.793-002	1.177-003	1.001-002	2.600-002
3.60	6.301-002	8.168-001	1.231-003	4.076-003	4.611-001	1.097-001	1.115-002	5.927-004	7.252-002	-5.338-003	1.428-002	2.970-002
3.70	9.763-002	1.062+000	1.318-003	4.206-003	4.617-001	1.101-001	1.222-002	1.291-004	9.275-002	-1.663-002	2.010-002	3.497-002
3.80	1.722-001	1.449+000	1.448-003	4.340-003	4.626-001	1.104-001	1.332-002	-7.798-004	1.230-001	-3.766-002	2.931-002	4.330-002
3.90	3.771-001	2.171+000	1.672-003	4.478-003	4.633-001	1.104-001	1.443-002	-2.441-003	1.749-001	-8.401-002	4.777-002	5.830-002
4.00	1.331+000	3.972+000	2.232-003	4.623-003	4.618-001	1.102-001	1.520-002	-6.203-003	2.808-001	-2.372-001	1.053-001	8.907-002
4.50	1.122-001	-1.130+000	1.162-003	4.947-003	4.883-001	1.092-001	1.365-002	-4.689-003	-5.651-002	6.904-002	-1.922-002	-2.793-002
5.00	2.868-002	-3.707-001	1.967-003	5.308-003	5.026-001	9.309-002	8.269-003	-8.502-003	7.368-004	1.527-002	-5.736-003	-4.794-003

Table A21b
Pressure Coefficients
$T = 0.05 \quad H = 2.0$

ka	p_1^0		p_2^0		p_3^0		p_1^{90}		p_2^{90}		p_3^{90}	
0.01	3.584-010	-9.751-003	1.838-011	-5.000-004	3.768-010	-1.025-002	4.521-010	-9.750-003	2.512-011	-5.000-004	4.753-010	-1.025-002
0.05	2.187-007	-4.882-002	1.120-008	-2.499-003	2.295-007	-5.119-002	3.057-007	-4.872-002	1.567-008	-2.496-003	3.208-007	-5.122-002
0.10	3.230-006	-9.808-002	1.647-007	-4.996-003	3.372-006	-1.020-001	4.893-006	-9.729-002	2.495-007	-4.971-003	5.107-006	-1.023-001
0.15	1.405-005	-1.482-001	7.113-007	-7.487-003	1.454-005	-1.520-001	2.475-005	-1.455-001	1.253-006	-7.402-003	2.559-005	-1.531-001
0.20	3.396-005	-1.998-001	1.704-006	-9.973-003	3.481-005	-2.010-001	7.813-005	-1.933-001	3.915-006	-9.768-003	7.976-005	-2.034-001
0.30	1.176-005	-3.099-001	6.212-007	-1.494-002	1.525-005	-2.942-001	3.956-004	-2.868-001	1.924-005	-1.422-002	3.884-004	-3.022-001
0.40	-7.625-004	-4.354-001	-3.499-005	-1.995-002	-6.684-004	-3.794-001	1.260-003	-3.767-001	5.863-005	-1.818-002	1.166-003	-3.976-001
0.50	-4.921-003	-5.879-001	-2.126-004	-2.515-002	-3.957-003	-4.543-001	3.150-003	-4.616-001	1.380-004	-2.148-002	2.677-003	-4.890-001
0.60	-2.066-002	-7.882-001	-8.215-004	-3.081-002	-1.455-002	-5.163-001	6.893-003	-5.405-001	2.785-004	-2.402-002	5.187-003	-5.755-001
0.70	-7.358-002	-1.075+000	-2.621-003	-3.738-002	-4.283-002	-5.592-001	1.418-002	-6.122-001	5.143-004	-2.566-002	8.934-003	-6.571-001
0.80	-2.526-001	-1.521+000	-7.780-003	-4.542-002	-1.104-001	-5.618-001	2.920-002	-6.762-001	9.154-004	-2.636-002	1.399-002	-7.341-001
0.90	-9.062-001	-2.179+000	-2.288-002	-5.295-002	-2.425-001	-4.348-001	6.264-002	-7.388-001	1.608-003	-2.625-002	1.879-002	-8.092-001
1.00	-2.810+000	-2.049+000	-5.329-002	-3.598-002	-2.040-001	5.541-002	1.113-001	-8.455-001	2.150-003	-2.605-002	1.110-002	-8.823-001
1.10	-3.149+000	3.250-001	-3.750-002	7.732-003	4.727-001	2.223-001	6.344-002	-9.672-001	8.076-004	-2.427-002	-5.469-003	-9.232-001
1.20	-1.905+000	1.026+000	-7.715-003	9.199-003	7.675-001	-6.380-002	1.292-002	-9.967-001	1.147-004	-1.980-002	-3.471-004	-9.524-001
1.30	-1.225+000	9.527-001	5.704-003	2.000-003	8.441-001	-2.158-001	-3.650-003	-1.010+000	8.118-005	-1.427-002	7.523-003	-9.814-001
1.40	-8.811-001	8.059-001	1.254-002	-3.410-003	8.912-001	-2.709-001	-9.575-003	-1.019+000	1.874-004	-7.758-003	1.362-002	-1.004+000
1.50	-6.827-001	6.819-001	1.688-002	-6.928-003	9.382-001	-2.762-001	-1.241-002	-1.023+000	3.228-004	-1.967-004	1.803-002	-1.018+000
1.60	-5.537-001	5.853-001	2.005-002	-9.101-003	9.871-001	-2.519-001	-1.435-002	-1.019+000	4.709-004	8.388-003	2.101-002	-1.023+000
1.70	-4.620-001	5.102-001	2.250-002	-1.029-002	1.036+000	-2.071-001	-1.605-002	-1.007+000	6.353-004	1.792-002	2.272-002	-1.018+000
1.80	-3.923-001	4.509-001	2.441-002	-1.072-002	1.082+000	-1.466-001	-1.769-002	-9.848-001	8.229-004	2.829-002	2.331-002	-1.002+000
1.90	-3.363-001	4.037-001	2.585-002	-1.052-002	1.122+000	-7.370-002	-1.920-002	-9.532-001	1.038-003	3.935-002	2.296-002	-9.757-001
2.00	-2.897-001	3.657-001	2.682-002	-9.770-003	1.156+000	9.634-003	-2.043-002	-9.121-001	1.279-003	5.092-002	2.187-002	-9.394-001
2.10	-2.497-001	3.351-001	2.733-002	-8.525-003	1.182+000	1.015-001	-2.119-002	-8.618-001	1.537-003	6.283-002	2.024-002	-8.931-001
2.20	-2.148-001	3.106-001	2.737-002	-6.814-003	1.197+000	2.007-001	-2.132-002	-8.030-001	1.793-003	7.487-002	1.829-002	-8.374-001
2.30	-1.838-001	2.914-001	2.692-002	-4.661-003	1.201+000	3.054-001	-2.068-002	-7.363-001	2.023-003	8.682-002	1.619-002	-7.727-001
2.40	-1.561-001	2.769-001	2.600-002	-2.078-003	1.192+000	4.146-001	-1.922-002	-6.625-001	2.198-003	9.849-002	1.409-002	-7.000-001
2.50	-1.313-001	2.665-001	2.459-002	9.342-004	1.171+000	5.268-001	-1.699-002	-5.828-001	2.287-003	1.097-001	1.208-002	-6.200-001
2.60	-1.090-001	2.602-001	2.273-002	4.371-003	1.137+000	6.405-001	-1.411-002	-4.981-001	2.265-003	1.201-001	1.018-002	-5.336-001
2.70	-8.911-002	2.577-001	2.044-002	8.224-003	1.090+000	7.541-001	-1.082-002	-4.096-001	2.114-003	1.298-001	8.388-003	-4.420-001
2.80	-7.158-002	2.590-001	1.779-002	1.250-002	1.029+000	8.665-001	-7.402-003	-3.183-001	1.829-003	1.383-001	6.652-003	-3.460-001
2.90	-5.651-002	2.644-001	1.487-002	1.719-002	9.555-001	9.761-001	-4.234-003	-2.253-001	1.416-003	1.456-001	4.899-003	-2.468-001
3.00	-4.416-002	2.743-001	1.178-002	2.225-002	8.700-001	1.081+000	-1.706-003	-1.317-001	8.923-004	1.515-001	3.036-003	-1.454-001
3.10	-3.479-002	2.894-001	8.650-003	2.763-002	7.734-001	1.180+000	-2.189-004	-3.846-002	2.779-004	1.558-001	9.578-004	-4.276-002
3.20	-2.877-002	3.113-001	5.592-003	3.321-002	6.666-001	1.271+000	-1.634-004	5.348-002	-4.104-004	1.583-001	-1.465-003	5.995-002
3.30	-2.645-002	3.421-001	2.704-003	3.889-002	5.508-001	1.353+000	-1.924-003	1.431-001	-1.168-003	1.590-001	-4.386-003	1.618-001
3.40	-2.832-002	3.851-001	4.737-005	4.454-002	4.273-001	1.423+000	-5.928-003	2.293-001	-2.003-003	1.575-001	-7.965-003	2.619-001
3.50	-3.476-002	4.461-001	-2.351-003	5.007-002	2.973-001	1.479+000	-1.279-002	3.105-001	-2.941-003	1.539-001	-1.235-002	3.593-001
3.60	-4.620-002	5.350-001	-4.468-003	5.551-002	1.621-001	1.521+000	-2.361-002	3.849-001	-4.019-003	1.481-001	-1.763-002	4.536-001
3.70	-6.270-002	6.713-001	-6.208-003	6.106-002	2.365-002	1.545+000	-4.079-002	4.492-001	-5.297-003	1.400-001	-2.380-002	5.441-001
3.80	-8.178-002	8.996-001	-7.214-003	6.729-002	-1.154-001	1.551+000	-7.043-002	4.977-001	-6.900-003	1.296-001	-3.080-002	6.336-001
3.90	-8.224-002	1.348+000	-6.118-003	7.582-002	-2.492-001	1.535+000	-1.321-001	5.172-001	-9.196-003	1.169-001	-3.839-002	7.135-001
4.00	1.746-001	2.556+000	5.065-003	9.210-002	-3.607-001	1.474+000	-3.267-001	4.752-001	-1.385-002	1.027-001	-4.528-002	7.969-001
4.50	2.782-001	-6.448-001	-3.379-002	5.044-002	-1.217+000	1.153+000	9.049-002	1.078+000	-1.048-002	2.819-003	-5.935-002	1.028+000
5.00	9.218-002	-1.473-001	-2.412-002	5.030-002	-1.743+000	3.974-001	3.093-002	9.596-001	-1.934-002	-1.231-001	-3.638-002	1.029+000

Table A22a
Impedance Coefficients
$T = 0.1 \quad H = 2.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	4.251-005	1.031-002	4.752-007	7.147-005	5.262-005	5.075-003	1.000-005	6.018-004	9.460-005	5.141-003	8.990-006	8.998-004
0.05	1.064-003	5.161-002	1.186-005	3.569-004	1.313-003	2.531-002	2.496-004	2.997-003	2.364-003	2.563-002	2.247-004	4.497-003
0.10	4.276-003	1.036-001	4.724-005	7.111-004	5.216-003	5.022-002	9.927-004	5.919-003	9.445-003	5.075-002	8.988-004	8.982-003
0.15	9.693-003	1.564-001	1.055-004	1.060-003	1.160-002	7.434-002	2.213-003	8.693-003	2.121-002	7.490-002	2.022-003	1.344-002
0.20	1.742-002	2.105-001	1.856-004	1.401-003	2.031-002	9.733-002	3.884-003	1.125-002	3.762-002	9.758-002	3.597-003	1.788-002
0.30	4.064-002	3.246-001	4.067-004	2.053-003	4.376-002	1.386-001	8.435-003	1.548-002	8.430-002	1.367-001	8.131-003	2.669-002
0.40	7.677-002	4.521-001	7.009-004	2.655-003	7.334-002	1.720-001	1.433-002	1.818-002	1.498-001	1.645-001	1.467-002	3.553-002
0.50	1.323-001	6.023-001	1.064-003	3.204-003	1.064-001	1.961-001	2.122-002	1.900-002	2.362-001	1.763-001	2.372-002	4.474-002
0.60	2.223-001	7.910-001	1.507-003	3.698-003	1.400-001	2.098-001	2.887-002	1.755-002	3.490-001	1.643-001	3.659-002	5.486-002
0.70	3.848-001	1.045+000	2.078-003	4.128-003	1.701-001	2.116-001	3.709-002	1.306-002	5.002-001	1.101-001	5.649-002	6.649-002
0.80	7.304-001	1.401+000	2.903-003	4.417-003	1.888-001	1.995-001	4.542-002	3.496-003	7.089-001	-4.045-002	9.193-002	7.867-002
0.90	1.623+000	1.794+000	4.222-003	4.125-003	1.719-001	1.764-001	4.986-002	-1.671-002	9.480-001	-4.697-001	1.652-001	7.531-002
1.00	3.528+000	8.798-001	4.994-003	1.576-003	8.276-002	2.244-001	2.377-002	-4.562-002	5.566-001	-1.439+000	2.645-001	-4.897-002
1.10	2.708+000	-1.722+000	1.509-003	4.928-004	1.514-001	3.882-001	-1.231-002	-1.595-002	-7.381-001	-1.090+000	1.254-001	-2.000-001
1.20	1.154+000	-1.727+000	1.683-004	2.513-003	2.771-001	3.910-001	8.199-004	7.093-003	-7.532-001	-3.212-001	1.962-002	-1.522-001
1.30	5.824-001	-1.311+000	1.371-004	3.858-003	3.410-001	3.598-001	1.317-002	9.982-003	-5.397-001	-3.856-002	-6.822-003	-1.074-001
1.40	3.569-001	-1.010+000	2.862-004	4.759-003	3.798-001	3.317-001	2.022-002	7.742-003	-3.785-001	6.538-002	-1.399-002	-8.130-002
1.50	2.509-001	-8.043-001	4.486-004	5.475-003	4.076-001	3.073-001	2.399-002	4.294-003	-2.655-001	1.047-001	-1.648-002	-6.514-002
1.60	1.937-001	-6.577-001	6.127-004	6.112-003	4.291-001	2.852-001	2.568-002	7.416-004	-1.846-001	1.163-001	-1.785-002	-5.413-002
1.70	1.590-001	-5.479-001	7.306-004	6.712-003	4.461-001	2.645-001	2.599-002	-2.503-003	-1.252-001	1.143-001	-1.903-002	-4.585-002
1.80	1.356-001	-4.618-001	9.947-004	7.287-003	4.595-001	2.449-001	2.535-002	-5.247-003	-8.133-002	1.052-001	-2.024-002	-3.903-002
1.90	1.182-001	-3.913-001	1.234-003	7.837-003	4.697-001	2.263-001	2.407-002	-7.396-003	-4.898-002	9.273-002	-2.144-002	-3.294-002
2.00	1.041-001	-3.313-001	1.510-003	8.355-003	4.772-001	2.088-001	2.242-002	-8.923-003	-2.545-002	7.891-002	-2.251-002	-2.717-002
2.10	9.189-002	-2.784-001	1.822-003	8.831-003	4.823-001	1.926-001	2.059-002	-9.834-003	-8.950-003	6.501-002	-2.333-002	-2.152-002
2.20	8.093-002	-2.300-001	2.159-003	9.255-003	4.852-001	1.776-001	1.877-002	-1.019-002	2.185-003	5.204-002	-2.377-002	-1.590-002
2.30	7.085-002	-1.845-001	2.511-003	9.620-003	4.864-001	1.642-001	1.708-002	-1.006-002	9.258-003	4.055-002	-2.371-002	-1.028-002
2.40	6.153-002	-1.405-001	2.861-003	9.923-003	4.861-001	1.522-001	1.562-002	-9.553-003	1.338-002	3.087-002	-2.309-002	-4.712-003
2.50	5.296-002	-9.708-002	3.191-003	1.017-002	4.847-001	1.419-001	1.445-002	-8.761-003	1.553-002	2.310-002	-2.186-002	7.504-004
2.60	4.519-002	-5.340-002	3.486-003	1.036-002	4.826-001	1.330-001	1.358-002	-7.780-003	1.653-002	1.718-002	-2.001-002	6.030-003
2.70	3.826-002	-8.723-003	3.731-003	1.052-002	4.798-001	1.257-001	1.302-002	-6.693-003	1.706-002	1.291-002	-1.756-002	1.105-002
2.80	3.225-002	3.769-002	3.919-003	1.066-002	4.768-001	1.198-001	1.276-002	-5.556-003	1.765-002	9.975-003	-1.454-002	1.574-002
2.90	2.721-002	8.664-002	4.047-003	1.080-002	4.737-001	1.152-001	1.277-002	-4.415-003	1.869-002	8.030-003	-1.101-002	2.005-002
3.00	2.325-002	1.391-001	4.124-003	1.098-002	4.708-001	1.118-001	1.307-002	-3.304-003	2.047-002	6.678-003	-7.051-003	2.395-002
3.10	2.048-002	1.963-001	4.166-003	1.120-002	4.681-001	1.096-001	1.364-002	-2.262-003	2.315-002	5.526-003	-2.747-003	2.746-002
3.20	1.911-002	2.599-001	4.196-003	1.147-002	4.658-001	1.082-001	1.451-002	-1.338-003	2.680-002	4.194-003	1.822-003	3.065-002
3.30	1.942-002	3.322-001	4.237-003	1.181-002	4.640-001	1.076-001	1.567-002	-6.032-004	3.153-002	2.348-003	6.609-003	3.368-002
3.40	2.189-002	4.168-001	4.312-003	1.219-002	4.629-001	1.076-001	1.712-002	-1.503-004	3.743-002	-3.729-004	1.164-002	3.679-002
3.50	2.737-002	5.189-001	4.437-003	1.260-002	4.624-001	1.080-001	1.879-002	-8.024-005	4.472-002	-4.413-003	1.706-002	4.035-002
3.60	3.746-002	6.477-001	4.623-003	1.304-002	4.624-001	1.086-001	2.062-002	-4.896-004	5.393-002	-1.040-002	2.325-002	4.487-002
3.70	5.560-002	8.192-001	4.879-003	1.349-002	4.630-001	1.093-001	2.249-002	-1.467-003	6.571-002	-1.960-002	3.096-002	5.117-002
3.80	9.016-002	1.065+000	5.232-003	1.394-002	4.640-001	1.100-001	2.427-002	-3.110-003	8.163-002	-3.440-002	4.183-002	6.067-002
3.90	1.658-001	1.459+000	5.752-003	1.441-002	4.652-001	1.106-001	2.583-002	-5.596-003	1.048-001	-6.061-002	5.981-002	7.623-002
4.00	3.813-001	2.208+000	6.658-003	1.481-002	4.662-001	1.113-001	2.693-002	-9.433-003	1.424-001	-1.163-001	9.755-002	1.048-001
4.50	1.946-001	-1.480+000	4.556-003	1.633-002	4.888-001	1.087-001	2.462-002	-1.172-002	-6.001-002	9.451-002	-5.330-002	-7.528-002
5.00	2.918-002	-4.547-001	8.535-003	1.731-002	5.032-001	9.360-002	1.289-002	-1.846-002	6.066-003	1.972-002	-1.940-002	-1.067-002

Table A22b
Pressure Coefficients
$T = 0.1 \quad H = 2.0$

kd	p^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	1.009-009 -9.501-003	1.062-010 -1.000-003	1.115-009 -1.050-002	9.114-010 -9.500-003	9.980-011 -9.999-004	1.007-009 -1.050-002
0.05	6.252-007 -4.757-002	6.571-008 -4.998-003	6.897-007 -5.243-002	5.920-007 -4.747-002	6.226-008 -4.992-003	6.531-007 -5.247-002
0.10	9.737-006 -9.554-002	1.019-006 -9.987-003	1.068-005 -1.044-001	9.463-006 -9.475-002	9.903-007 -9.935-003	1.038-005 -1.048-001
0.15	4.70 -005 -1.443-001	4.885-006 -1.496-002	5.113-005 -1.555-001	4.781-005 -1.417-001	4.966-006 -1.478-002	5.196-005 -1.567-001
0.20	1.385-004 -1.945-001	1.424-005 -1.991-002	1.487-004 -2.053-001	1.507-004 -1.880-001	1.549-005 -1.948-002	1.616-004 -2.081-001
0.30	5.473-004 -3.013-001	5.465-005 -2.975-002	5.684-004 -2.997-001	7.599-004 -2.783-001	7.572-005 -2.828-002	7.831-004 -3.089-001
0.40	9.799-004 -4.229-001	9.441-005 -3.963-002	9.946-004 -3.847-001	2.408-003 -3.642-001	2.293-004 -3.597-002	2.335-003 -4.060-001
0.50	-4.063-004 -5.708-001	-2.970-005 -4.982-002	-9.345-005 -4.583-001	5.990-003 -4.443-001	5.356-004 -4.227-002	5.321-003 -4.987-001
0.60	-1.025-002 -7.657-001	-8.134-004 -6.088-002	-6.854-003 -5.176-001	1.305-002 -5.171-001	1.073-003 -4.689-002	1.022-002 -5.868-001
0.70	-5.066-002 -1.048+000	-3.620-003 -7.381-002	-2.885-002 -5.569-001	2.679-002 -5.809-001	1.968-003 -4.963-002	1.745-002 -6.704-001
0.80	-2.027-001 -1.498+000	-1.249-002 -9.008-002	-8.667-002 -5.564-001	5.539-002 -6.348-001	3.498-003 -5.041-002	2.712-002 -7.514-001
0.90	-8.127-001 -2.213+000	-4.082-002 -1.075-001	-2.081-001 -4.310-001	1.220-001 -6.896-001	6.251-003 -4.984-002	3.640-002 -8.351-001
1.00	-2.863+000 -2.222+000	-1.067-001 -7.748-002	-1.616-001 7.189-002	2.322-001 -8.442-001	8.824-003 -5.125-002	2.035-002 -9.236-001
1.10	-3.255+000 4.094-001	-7.394-002 1.662-002	5.597-001 2.003-001	1.269-001 -1.053+000	3.106-003 -4.888-002	-1.254-002 -9.517-001
1.20	-1.890+000 1.087+000	-1.239-002 1.687-002	8.151-001 -1.119-001	2.153-002 -1.064+000	3.952-004 -3.758-002	1.345-003 -9.704-001
1.30	-1.202+000 9.757-001	1.357-002 1.599-003	8.704-001 -2.506-001	-1.013-002 -1.056+000	3.606-004 -2.463-002	1.764-002 -9.991-001
1.40	-8.640-001 8.156-001	2.668-002 -9.238-003	9.104-001 -2.907-001	-2.127-002 -1.054+000	8.293-004 -1.001-002	2.948-002 -1.024+000
1.50	-6.706-001 6.870-001	3.507-002 -1.614-002	9.553-001 -2.829-001	-2.686-002 -1.050+000	1.409-003 6.591-003	3.771-002 -1.042+000
1.60	-5.451-001 5.888-001	4.123-002 -2.035-002	1.004+000 -2.470-001	-3.095-002 -1.041+000	2.058-003 2.520-002	4.299-002 -1.049+000
1.70	-4.555-001 5.130-001	4.598-002 -2.263-002	1.052+000 -1.918-001	-3.469-002 -1.023+000	2.799-003 4.566-002	4.569-002 -1.047+000
1.80	-3.870-001 4.532-001	4.965-002 -2.340-002	1.097+000 -1.218-001	-3.828-002 -9.971-001	3.662-003 6.772-002	4.617-002 -1.034+000
1.90	-3.317-001 4.054-001	5.233-002 -2.291-002	1.137+000 -4.001-002	-4.151-002 -9.613-001	4.658-003 9.102-002	4.480-002 -1.009+000
2.00	-2.853-001 3.665-001	5.405-002 -2.132-002	1.169+000 5.128-002	-4.402-002 -9.159-001	5.768-003 1.151-001	4.203-002 -9.732-001
2.10	-2.457-001 3.348-001	5.479-002 -1.870-002	1.191+000 1.508-001	-4.541-002 -8.612-001	6.934-003 1.396-001	3.831-002 -9.265-001
2.20	-2.109-001 3.089-001	5.456-002 -1.511-002	1.202+000 2.566-001	-4.531-002 -7.979-001	8.066-003 1.640-001	3.411-002 -8.693-001
2.30	-1.800-001 2.879-001	5.333-002 -1.059-002	1.201+000 3.674-001	-4.353-002 -7.271-001	9.044-003 1.879-001	2.979-002 -8.024-001
2.40	-1.525-001 2.713-001	5.112-002 -5.176-003	1.187+000 4.816-001	-4.000-002 -6.499-001	9.739-003 2.108-001	2.564-002 -7.266-001
2.50	-1.276-001 2.586-001	4.795-002 1.126-003	1.158+000 5.979-001	-3.490-002 -5.675-001	1.003-002 2.322-001	2.180-002 -6.432-001
2.60	-1.053-001 2.495-001	4.386-002 8.302-003	1.116+000 7.147-001	-2.858-002 -4.814-001	9.811-003 2.519-001	1.830-002 -5.531-001
2.70	-8.527-002 2.437-001	3.895-002 1.634-002	1.059+000 8.304-001	-2.155-002 -3.928-001	9.041-003 2.696-001	1.508-002 -4.576-001
2.80	-6.751-002 2.412-001	3.333-002 2.522-002	9.886-001 9.436-001	-1.447-002 -3.030-001	7.719-003 2.848-001	1.200-002 -3.578-001
2.90	-5.217-002 2.419-001	2.720-002 3.492-002	9.049-001 1.053+000	-8.084-003 -2.129-001	5.897-003 2.973-001	8.894-003 -2.549-001
3.00	-3.952-002 2.462-001	2.077-002 4.533-002	8.087-001 1.156+000	-3.144-003 -1.236-001	3.667-003 3.068-001	5.562-003 -1.499-001
3.10	-2.997-002 2.544-001	1.430-002 5.631-002	7.013-001 1.251+000	-3.667-004 -3.585-002	1.128-003 3.128-001	1.773-003 -4.405-002
3.20	-2.400-002 2.678-001	8.012-003 6.760-002	5.839-001 1.337+000	-3.744-004 4.957-002	-1.646-003 3.150-001	-2.741-003 6.168-002
3.30	-2.204-002 2.879-001	2.078-003 7.892-002	4.576-001 1.411+000	-3.680-003 1.319-001	-4.632-003 3.130-001	-8.280-003 1.663-001
3.40	-2.450-002 3.172-001	-3.425-003 8.997-002	3.238-001 1.471+000	-1.075-002 2.101-001	-7.868-003 3.065-001	-1.515-002 2.691-001
3.50	-3.174-002 3.594-001	-8.512-003 1.005-001	1.837-001 1.516+000	-2.220-002 2.827-001	-1.144-002 2.953-001	-2.357-002 3.694-001
3.60	-4.410-002 4.204-001	-1.323-002 1.105-001	3.857-002 1.544+000	-3.917-002 3.476-001	-1.546-002 2.792-001	-3.364-002 4.668-001
3.70	-6.210-002 5.104-001	-1.759-002 1.201-001	-1.099-001 1.555+000	-6.408-002 4.014-001	-2.009-002 2.583-001	-4.522-002 5.610-001
3.80	-8.608-002 6.499-001	-2.133-002 1.298-001	-2.600-001 1.545+000	-1.025-001 4.379-001	-2.555-002 2.325-001	-5.791-002 6.522-001
3.90	-1.142-001 8.863-001	-2.362-002 1.410-001	-4.086-001 1.515+000	-1.690-001 4.457-001	-3.240-002 2.019-001	-7.106-002 7.405-001
4.00	-1.249-001 1.359+000	-2.133-002 1.569-001	-5.505-001 1.458+000	-3.107-001 3.971-001	-4.233-002 1.673-001	-8.335-002 8.277-001
4.50	3.839-001 -9.553-001	-7.422-002 9.795-002	-1.358+000 1.021+000	2.530-001 1.272+000	-4.209-002 -5.599-002	-1.102-001 1.086+000
5.00	7.943-002 -2.036-001	-5.388-002 1.030-001	-1.812+000 1.804-001	1.014-001 9.643-001	-8.593-002 -3.161-001	-5.877-002 1.104+000

Table A23a
Impedance Coefficients
$T = 0.2 \quad H = 2.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	3.670-005	9.671-003	1.818-006	2.453-004	5.500-005	5.167-003	2.000-005	1.143-003	8.986-005	4.634-003	1.634-005	1.618-003
0.05	9.187-004	4.842-002	4.537-005	1.225-003	1.371-003	2.576-002	4.989-004	5.689-003	2.245-003	2.309-002	4.083-004	8.088-003
0.10	3.689-003	9.722-002	1.804-004	2.438-003	5.442-003	5.108-002	1.982-003	1.122-002	8.961-003	4.566-002	1.632-003	1.615-002
0.15	8.355-003	1.468-001	4.022-004	3.630-003	1.208-002	7.554-002	4.409-003	1.643-002	2.010-002	6.721-002	3.666-003	2.417-002
0.20	1.501-002	1.977-001	7.060-004	4.790-003	2.110-002	9.874-002	7.718-003	2.119-002	3.558-002	8.726-002	6.509-003	3.214-002
0.30	3.492-002	3.057-001	1.536-003	6.998-003	4.511-002	1.401-001	1.664-002	2.885-002	7.933-002	1.214-001	1.465-002	4.799-002
0.40	6.589-002	4.275-001	2.625-003	8.997-003	7.491-002	1.732-001	2.801-002	3.340-002	1.402-001	1.438-001	2.630-002	6.402-002
0.50	1.137-001	5.731-001	3.950-003	1.081-002	1.076-001	1.970-001	4.109-002	3.425-002	2.199-001	1.506-001	4.238-002	8.104-002
0.60	1.924-001	7.602-001	5.555-003	1.246-002	1.400-001	2.107-001	5.533-002	3.074-002	3.238-001	1.350-001	6.535-002	1.005-001
0.70	3.390-001	1.020+000	7.633-003	1.392-002	1.683-001	2.136-001	7.041-002	2.151-002	4.639-001	7.893-002	1.016-001	1.242-001
0.80	6.684-001	1.407+000	1.074-002	1.496-002	1.847-001	2.043-001	8.558-002	2.606-003	6.613-001	-7.238-002	1.691-001	1.523-001
0.90	1.608+000	1.987+000	1.614-002	1.381-002	1.648-001	1.877-001	9.274-002	-3.792-002	8.906-001	-5.192-001	3.213-001	1.545-001
1.00	3.794+000	7.622-001	1.912-002	2.367-003	8.146-002	2.621-001	3.050-002	-9.184-002	3.369-001	-1.525+000	5.365-001	-1.295-001
1.10	2.468+000	-1.918+000	4.197-003	-9.858-005	1.981-001	4.021-001	-2.442-002	-1.650-002	-8.777-001	-8.467-001	1.976-001	-4.006-001
1.20	9.976-001	-1.680+000	4.343-004	7.737-003	3.059-001	3.769-001	9.093-003	1.629-002	-7.150-001	-1.658-001	1.842-002	-2.825-001
1.30	5.140-001	-1.252+000	6.842-004	1.234-002	3.556-001	3.436-001	3.105-002	1.608-002	-4.847-001	4.228-002	-2.125-002	-1.998-001
1.40	3.248-001	-9.663-001	1.368-003	1.542-002	3.872-001	3.177-001	4.238-002	9.352-003	-3.306-001	1.113-001	-3.217-002	-1.533-001
1.50	2.347-001	-7.762-001	2.090-003	1.789-002	4.113-001	2.960-001	4.774-002	1.529-003	-2.260-001	1.326-001	-3.661-002	-1.245-001
1.60	1.848-001	-6.420-001	2.860-003	2.011-002	4.310-001	2.763-001	4.939-002	-5.916-003	-1.519-001	1.339-001	-3.963-002	-1.045-001
1.70	1.536-001	-5.422-001	3.734-003	2.218-002	4.472-001	2.575-001	4.853-002	-1.240-002	-9.812-002	1.251-001	-4.246-002	-8.902-002
1.80	1.316-001	-4.643-001	4.754-003	2.411-002	4.604-001	2.394-001	4.597-002	-1.761-002	-5.873-002	1.114-001	-4.524-002	-7.583-002
1.90	1.145-001	-4.007-001	5.937-003	2.589-002	4.707-001	2.219-001	4.235-002	-2.142-002	-3.027-002	9.543-002	-4.775-002	-6.372-002
2.00	1.000-001	-3.466-001	7.267-003	2.748-002	4.785-001	2.050-001	3.820-002	-2.381-002	-1.032-002	7.895-002	-4.969-002	-5.209-002
2.10	8.716-002	-2.989-001	8.706-003	2.882-002	4.837-001	1.891-001	3.397-002	-2.486-002	2.956-003	6.317-002	-5.079-002	-4.069-002
2.20	7.544-002	-2.552-001	1.019-002	2.999-002	4.868-001	1.743-001	3.002-002	-2.475-002	1.110-002	4.894-002	-5.080-002	-2.948-002
2.30	6.466-002	-2.142-001	1.165-002	3.069-002	4.880-001	1.609-001	2.658-002	-2.373-002	1.546-002	3.673-002	-4.961-002	-1.858-002
2.40	5.477-002	-1.748-001	1.300-002	3.122-002	4.877-001	1.490-001	2.381-002	-2.205-002	1.721-002	2.675-002	-4.717-002	-8.122-003
2.50	4.580-002	-1.362-001	1.419-002	3.155-002	4.863-001	1.386-001	2.176-002	-1.995-002	1.735-002	1.896-002	-4.351-002	1.708-003
2.60	3.776-002	-9.780-002	1.514-002	3.174-002	4.840-001	1.298-001	2.042-002	-1.764-002	1.668-002	1.317-002	-3.872-002	1.075-002
2.70	3.066-002	-5.912-002	1.584-002	3.182-002	4.811-001	1.225-001	1.973-002	-1.527-002	1.582-002	9.025-003	-3.292-002	1.888-002
2.80	2.448-002	-1.967-002	1.626-002	3.194-002	4.780-001	1.167-001	1.963-002	-1.295-002	1.521-002	6.130-003	-2.629-002	2.597-002
2.90	1.924-002	2.107-002	1.643-002	3.218-002	4.748-001	1.122-001	2.007-002	-1.075-002	1.509-002	4.056-003	-1.901-002	3.194-002
3.00	1.494-002	6.370-002	1.641-002	3.261-002	4.717-001	1.089-001	2.103-002	-8.707-003	1.558-002	2.395-003	-1.131-002	3.678-002
3.10	1.168-002	1.089-001	1.628-002	3.330-002	4.690-001	1.066-001	2.250-002	-6.899-003	1.667-002	7.969-004	-3.438-003	4.051-002
3.20	9.551-003	1.576-001	1.615-002	3.427-002	4.666-001	1.053-001	2.450-002	-5.427-003	1.826-002	-1.001-003	4.349-003	4.329-002
3.30	8.730-003	2.108-001	1.612-002	3.550-002	4.647-001	1.047-001	2.701-002	-4.440-003	2.027-002	-3.185-003	1.186-002	4.541-002
3.40	9.420-003	2.700-001	1.626-002	3.693-002	4.634-001	1.046-001	2.996-002	-4.113-003	2.264-002	-5.888-003	1.901-002	4.727-002
3.50	1.190-002	3.372-001	1.663-002	3.851-002	4.627-001	1.050-001	3.318-002	-4.613-003	2.538-002	-9.276-003	2.591-002	4.940-002
3.60	1.659-002	4.158-001	1.723-002	4.015-002	4.625-001	1.056-001	3.647-002	-6.059-003	2.857-002	-1.361-002	3.289-002	5.238-002
3.70	2.430-002	5.106-001	1.808-002	4.183-002	4.628-001	1.065-001	3.956-002	-8.512-003	3.232-002	-1.937-002	4.059-002	5.688-002
3.80	3.668-002	6.301-001	1.918-002	4.352-002	4.636-001	1.076-001	4.217-002	-1.197-002	3.671-002	-2.732-002	5.006-002	6.373-002
3.90	5.736-002	7.891-001	2.061-002	4.521-002	4.649-001	1.087-001	4.404-002	-1.639-002	4.182-002	-3.881-002	6.315-002	7.410-002
4.00	9.527-002	1.017+000	2.249-002	4.688-002	4.667-001	1.099-001	4.484-002	-2.174-002	4.743-002	-5.637-002	8.344-002	8.992-002
4.50	1.883+000	-3.956+000	1.154-002	4.820-002	4.895-001	1.054-001	3.981-002	-2.060-002	-1.666-001	2.557-001	-2.203-001	-5.063-001
5.00	4.646-002	-6.896-001	3.908-002	5.264-002	5.029-001	9.216-002	1.226-002	-3.849-002	1.982-002	2.633-002	-7.635-002	-2.341-002

Table A23b
Pressure Coefficients
$T = 0.2 \quad H = 2.0$

ka	p_1^0		p_2^0		p_3^0		p_1^{90}		p_2^{90}		p_3^{90}	
0.01	1.812-009	-9.000-003	4.026-010	-2.000-003	2.214-009	-1.100-002	1.765-009	-9.000-003	4.000-010	-2.000-003	2.158-009	-1.100-002
0.05	1.127-006	-4.506-002	2.500-007	-9.995-003	1.374-006	-5.491-002	1.124-006	-4.496-002	2.494-007	-9.981-003	1.371-006	-5.496-002
0.10	1.774-005	-9.050-002	3.917-006	-1.996-002	2.151-005	-1.093-001	1.795-005	-8.967-002	3.963-006	-1.985-002	2.176-005	-1.097-001
0.15	8.738-005	-1.367-001	1.914-005	-2.988-002	1.049-004	-1.626-001	9.054-005	-1.339-001	1.983-005	-2.948-002	1.087-004	-1.640-001
0.20	2.654-004	-1.842-001	5.749-005	-3.972-002	3.144-004	-2.143-001	2.849-004	-1.774-001	6.171-005	-3.878-002	3.373-004	-2.176-001
0.30	1.185-003	-2.856-001	2.484-004	-5.922-002	1.350-003	-3.114-001	1.430-003	-2.613-001	2.996-004	-5.596-002	1.623-003	-3.223-001
0.40	2.996-003	-4.014-001	6.004-004	-7.814-002	3.247-003	-3.974-001	4.511-003	-3.396-001	8.996-004	-7.060-002	4.797-003	-4.227-001
0.50	4.622-003	-5.438-001	8.782-004	-9.860-002	4.836-003	-4.699-001	1.118-002	-4.102-001	2.083-003	-8.206-002	1.083-002	-5.184-001
0.60	7.241-004	-7.346-001	1.971-004	-1.203-001	2.186-003	-5.263-001	2.436-002	-4.710-001	4.141-003	-8.976-002	2.059-002	-6.098-001
0.70	-2.868-002	-1.018+000	-4.051-003	-1.461-001	-1.432-002	-5.607-001	5.039-002	-5.186-001	7.572-003	-9.327-002	3.486-002	-6.982-001
0.80	-1.643-001	-1.490+000	-2.011-002	-1.797-001	-6.638-002	-5.528-001	1.066-001	-5.503-001	1.356-002	-9.259-002	5.389-002	-7.877-001
0.90	-8.013-001	-2.299+000	-7.857-002	-2.190-001	-1.857-001	-4.080-001	2.486-001	-5.866-001	2.503-002	-9.048-002	7.164-002	-8.913-001
1.00	-3.213+000	-2.198+000	-2.247-001	-1.431-001	-6.565-002	1.605-001	4.943-001	-8.787-001	3.539-002	-1.037-001	2.798-002	-1.011+000
1.10	-3.141+000	7.523-001	-1.205-001	4.428-002	7.039-001	1.286-001	2.108-001	-1.234+000	9.052-003	-1.000-001	-2.608-002	-9.983-001
1.20	-1.721+000	1.160+000	-5.822-003	2.496-002	8.638-001	-1.792-001	2.124-002	-1.186+000	1.069-003	-6.793-002	1.140-002	-1.006+000
1.30	-1.100+000	9.862-001	3.859-002	-6.997-003	8.963-001	-2.791-001	-3.041-002	-1.142+000	1.886-003	-3.554-002	4.284-002	-1.039+000
1.40	-7.998-001	8.162-001	6.170-002	-2.781-002	9.328-001	-2.902-001	-4.986-002	-1.119+000	4.153-003	-7.970-004	6.420-002	-1.071+000
1.50	-6.265-001	6.883-001	7.702-002	-4.085-002	9.783-001	-2.594-001	-6.133-002	-1.103+000	6.879-003	3.768-002	7.825-002	-1.096+000
1.60	-5.122-001	5.925-001	8.843-002	-4.882-002	1.028+000	-2.037-001	-7.087-002	-1.083+000	1.006-002	8.010-002	8.634-002	-1.112+000
1.70	-4.293-001	5.186-001	9.716-002	-5.310-002	1.076+000	-1.305-001	-7.998-002	-1.058+000	1.385-002	1.261-001	8.921-002	-1.116+000
1.80	-3.650-001	4.598-001	1.036-001	-5.444-002	1.120+000	-4.401-002	-8.854-002	-1.023+000	1.834-002	1.748-001	8.764-002	-1.107+000
1.90	-3.125-001	4.118-001	1.080-001	-5.323-002	1.157+000	5.290-002	-9.580-002	-9.778-001	2.348-002	2.253-001	8.257-002	-1.085+000
2.00	-2.683-001	3.717-001	1.103-001	-4.968-002	1.184+000	1.581-001	-1.008-001	-9.226-001	2.908-002	2.764-001	7.509-002	-1.050+000
2.10	-2.303-001	3.378-001	1.104-001	-4.390-002	1.199+000	2.697-001	-1.026-001	-8.580-001	3.472-002	3.270-001	6.631-002	-1.001+000
2.20	-1.970-001	3.090-001	1.086-001	-3.598-002	1.200+000	3.861-001	-1.006-001	-7.853-001	3.988-002	3.759-001	5.726-002	-9.392-001
2.30	-1.677-001	2.846-001	1.048-001	-2.601-002	1.187+000	5.056-001	-9.465-002	-7.061-001	4.396-002	4.223-001	4.870-002	-8.663-001
2.40	-1.414-001	2.640-001	9.899-002	-1.406-002	1.158+000	6.267-001	-8.499-002	-6.223-001	4.638-002	4.653-001	4.110-002	-7.835-001
2.50	-1.179-001	2.469-001	9.176-002	-2.189-004	1.113+000	7.477-001	-7.228-002	-5.357-001	4.670-002	5.044-001	3.458-002	-6.921-001
2.60	-9.654-002	2.328-001	8.201-002	1.544-002	1.052+000	8.670-001	-5.756-002	-4.481-001	4.466-002	5.392-001	2.904-002	-5.939-001
2.70	-7.726-002	2.213-001	7.110-002	3.288-002	9.763-001	9.828-001	-4.209-002	-3.607-001	4.020-002	5.690-001	2.417-002	-4.902-001
2.80	-6.000-002	2.123-001	5.890-002	5.200-002	8.854-001	1.093+000	-2.728-002	-2.748-001	3.355-002	5.936-001	1.958-002	-3.824-001
2.90	-4.496-002	2.053-001	4.578-002	7.268-002	7.808-001	1.197+000	-1.456-002	-1.911-001	2.508-002	6.123-001	1.485-002	-2.718-001
3.00	-3.255-002	2.004-001	3.220-002	9.471-002	6.636-001	1.291+000	-5.268-003	-1.100-001	1.528-002	6.244-001	9.525-003	-1.595-001
3.10	-2.329-002	1.984-001	1.865-002	1.177-001	5.356-001	1.374+000	-4.809-004	-3.174-002	4.617-003	6.289-001	3.115-003	-4.680-002
3.20	-1.776-002	1.993-001	5.599-003	1.410-001	3.981-001	1.444+000	-9.098-004	4.377-002	-6.637-003	6.248-001	-4.933-003	6.545-002
3.30	-1.636-002	2.048-001	-6.687-003	1.641-001	2.529-001	1.498+000	-6.840-003	1.164-001	-1.846-002	6.111-001	-1.521-002	1.764-001
3.40	-1.928-002	2.162-001	-1.815-002	1.861-001	1.013-001	1.536+000	-1.824-002	1.857-001	-3.108-002	5.868-001	-2.823-002	2.857-001
3.50	-2.645-002	2.357-001	-2.895-002	2.067-001	-5.510-002	1.554+000	-3.505-002	2.505-001	-4.491-002	5.515-001	-4.428-002	3.931-001
3.60	-3.763-002	2.657-001	-3.932-002	2.254-001	-2.150-001	1.552+000	-5.765-002	3.087-001	-6.039-002	5.049-001	-6.323-002	4.989-001
3.70	-5.262-002	3.097-001	-4.944-002	2.424-001	-3.767-001	1.530+000	-8.746-002	3.573-001	-7.796-002	4.472-001	-8.447-002	6.032-001
3.80	-7.133-002	3.732-001	-5.925-002	2.581-001	-5.385-001	1.486+000	-1.279-001	3.918-001	-9.813-002	3.785-001	-1.068-001	7.062-001
3.90	-9.372-002	4.660-001	-6.831-002	2.731-001	-6.984-001	1.420+000	-1.860-001	4.058-001	-1.216-001	2.995-001	-1.287-001	8.081-001
4.00	-1.191-001	6.075-001	-7.551-002	2.887-001	-8.542-001	1.333+000	-2.776-001	3.888-001	-1.498-001	2.107-001	-1.478-001	9.087-001
4.50	1.832+000	-2.151+000	-1.560-001	9.393-002	-1.632+000	7.274-001	1.097+000	3.311+000	-1.116-001	-2.767-001	-1.842-001	1.181+000
5.00	7.915-002	-3.604-001	-1.214-001	2.080-001	-1.865+000	-2.755-001	4.078-001	9.813-001	-4.122-001	-8.389-001	-5.734-002	1.260+000

Table A24a
Impedance Coefficients
$T = 0.3 \quad H = 2.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	3.114-005	8.981-003	3.907-006	4.932-004	5.760-005	5.273-003	3.000-005	1.640-003	8.471-005	4.166-003	2.206-005	2.171-003
0.05	7.793-004	4.496-002	9.746-005	2.462-003	1.436-003	2.629-002	7.481-004	8.160-003	2.116-003	2.074-002	5.512-004	1.085-002
0.10	3.127-003	9.031-002	3.871-004	4.898-003	5.690-003	5.208-002	2.968-003	1.607-002	8.437-003	4.096-002	2.201-003	2.166-002
0.15	7.075-003	1.364-001	8.612-004	7.284-003	1.261-002	7.693-002	6.591-003	2.347-002	1.889-002	6.013-002	4.937-003	3.241-002
0.20	1.269-002	1.838-001	1.508-003	9.599-003	2.195-002	1.004-001	1.151-002	3.016-002	3.337-002	7.779-002	8.747-003	4.308-002
0.30	2.942-002	2.847-001	3.258-003	1.396-002	4.662-002	1.420-001	2.464-002	4.066-002	7.401-002	1.068-001	1.958-002	6.430-002
0.40	5.533-002	3.991-001	5.519-003	1.790-002	7.673-002	1.749-001	4.109-002	4.643-002	1.300-001	1.247-001	3.494-002	8.589-002
0.50	9.534-002	5.374-001	8.228-003	2.146-002	1.091-001	1.985-001	5.968-002	4.675-002	2.025-001	1.278-001	5.599-002	1.092-001
0.60	1.617-001	7.176-001	1.147-002	2.470-002	1.407-001	2.125-001	7.951-002	4.085-002	2.964-001	1.096-001	8.603-002	1.365-001
0.70	2.874-001	9.741-001	1.564-002	2.769-002	1.676-001	2.168-001	1.001-001	2.701-002	4.231-001	5.358-002	1.339-001	1.716-001
0.80	5.802-001	1.372+000	2.201-002	3.006-002	1.828-001	2.109-001	1.206-001	-1.301-004	6.034-001	-9.154-002	2.254-001	2.176-001
0.90	1.483+000	1.938+000	3.385-002	2.839-002	1.637-001	2.009-001	1.302-001	-5.815-002	8.205-001	-5.243-001	4.467-001	2.401-001
1.00	3.927+000	8.484-001	4.229-002	2.111-003	9.054-002	2.897-001	3.230-002	-1.361-001	2.020-001	-1.545+000	8.114-001	-1.894-001
1.10	2.366+000	-2.006+000	7.580-003	-2.455-003	2.351-001	4.054-001	-3.390-002	-1.150-002	-9.520-001	-6.714-001	2.574-001	-5.962-001
1.20	9.201-001	-1.647+000	8.462-004	1.474-002	3.269-001	3.638-001	2.139-002	2.449-002	-6.812-001	-5.571-002	1.093-002	-4.034-001
1.30	4.797-001	-1.212+000	1.854-003	2.419-002	3.665-001	3.306-001	5.113-002	1.842-002	-4.413-001	1.032-001	-3.927-002	-2.853-001
1.40	3.094-001	-9.377-001	3.579-003	3.050-002	3.933-001	3.071-001	6.506-002	5.986-003	-2.916-001	1.481-001	-5.359-002	-2.205-001
1.50	2.277-001	-7.582-001	5.427-003	3.561-002	4.151-001	2.877-001	7.050-002	-6.792-003	-1.924-001	1.562-001	-6.036-002	-1.803-001
1.60	1.816-001	-6.331-001	7.483-003	4.017-002	4.338-001	2.699-001	7.069-002	-1.832-002	-1.229-001	1.490-001	-6.557-002	-1.517-001
1.70	1.517-001	-5.407-001	9.869-003	4.433-002	4.499-001	2.526-001	6.737-002	-2.790-002	-7.283-002	1.344-001	-7.045-002	-1.290-001
1.80	1.298-001	-4.689-001	1.264-002	4.807-002	4.633-001	2.354-001	6.175-002	-3.515-002	-3.688-002	1.163-001	-7.489-002	-1.090-001
1.90	1.121-001	-4.105-001	1.578-002	5.131-002	4.740-001	2.183-001	5.487-002	-3.991-002	-1.173-002	9.680-002	-7.843-002	-9.035-002
2.00	9.676-002	-3.608-001	1.918-002	5.394-002	4.821-001	2.015-001	4.761-002	-4.226-002	4.903-003	7.770-002	-8.056-002	-7.237-002
2.10	8.297-002	-3.168-001	2.268-002	5.589-002	4.875-001	1.855-001	4.068-002	-4.248-002	1.493-002	6.013-002	-8.092-002	-5.497-002
2.20	7.042-002	-2.765-001	2.609-002	5.717-002	4.906-001	1.705-001	3.461-002	-4.100-002	2.000-002	4.486-002	-7.930-002	-3.830-002
2.30	5.906-002	-2.388-001	2.924-002	5.782-002	4.917-001	1.569-001	2.971-002	-3.830-002	2.159-002	3.225-002	-7.571-002	-2.262-002
2.40	4.886-002	-2.026-001	3.195-002	5.797-002	4.912-001	1.448-001	2.609-002	-3.488-002	2.099-002	2.234-002	-7.028-002	-8.213-003
2.50	3.982-002	-1.675-001	3.411-002	5.776-002	4.895-001	1.343-001	2.370-002	-3.112-002	1.920-002	1.492-002	-6.323-002	4.714-003
2.60	3.190-002	-1.330-001	3.568-002	5.750-002	4.869-001	1.255-001	2.240-002	-2.737-002	1.700-002	9.610-003	-5.484-002	1.599-002
2.70	2.501-002	-9.881-002	3.657-002	5.706-002	4.839-001	1.182-001	2.211-002	-2.372-002	1.492-002	5.931-003	-4.536-002	2.553-002
2.80	1.910-002	-6.455-002	3.689-002	5.696-002	4.805-001	1.124-001	2.261-002	-2.035-002	1.329-002	3.395-003	-3.511-002	3.323-002
2.90	1.410-002	-2.984-002	3.672-002	5.728-002	4.771-001	1.079-001	2.383-002	-1.731-002	1.221-002	1.541-003	-2.439-002	3.905-002
3.00	1.001-002	5.735-003	3.621-002	5.818-002	4.739-001	1.047-001	2.575-002	-1.463-002	1.167-002	-1.805-005	-1.357-002	4.299-002
3.10	6.899-003	4.260-002	3.559-002	5.976-002	4.709-001	1.024-001	2.838-002	-1.242-002	1.154-002	-1.562-003	-3.056-003	4.517-002
3.20	4.865-003	8.121-002	3.510-002	6.202-002	4.684-001	1.011-001	3.172-002	-1.085-002	1.164-002	-3.242-003	6.754-003	4.584-002
3.30	4.034-003	1.221-001	3.495-002	6.490-002	4.663-001	1.005-001	3.571-002	-1.016-002	1.184-002	-5.105-003	1.554-002	4.544-002
3.40	4.513-003	1.657-001	3.533-002	6.824-002	4.648-001	1.005-001	4.017-002	-1.061-002	1.208-002	-7.148-003	2.315-002	4.457-002
3.50	6.371-003	2.130-001	3.633-002	7.188-002	4.637-001	1.009-001	4.480-002	-1.241-002	1.238-002	-9.397-003	2.969-002	4.389-002
3.60	9.666-003	2.649-001	3.797-002	7.565-002	4.632-001	1.018-001	4.921-002	-1.568-002	1.279-002	-1.197-002	3.554-002	4.406-002
3.70	1.452-002	3.234-001	4.026-002	7.943-002	4.632-001	1.029-001	5.296-002	-2.041-002	1.337-002	-1.510-002	4.131-002	4.564-002
3.80	2.126-002	3.910-001	4.322-002	8.314-002	4.638-001	1.044-001	5.560-002	-2.646-002	1.404-002	-1.917-002	4.788-002	4.913-002
3.90	3.061-002	4.717-001	4.690-002	8.667-002	4.651-001	1.061-001	5.671-002	-3.355-002	1.454-002	-2.467-002	5.644-002	5.498-002
4.00	4.412-002	5.721-001	5.141-002	9.008-002	4.671-001	1.079-001	5.593-002	-4.134-002	1.438-002	-3.220-002	6.869-002	6.346-002
4.50	8.589-001	2.528+000	9.107-002	8.297-002	4.901-001	1.107-001	1.366-002	-6.583-002	-8.771-002	-1.492-001	4.621-001	1.267-001
5.00	1.413-001	-1.217+000	9.239-002	8.908-002	5.050-001	8.899-002	2.103-003	-5.315-002	4.696-002	3.486-002	-2.067-001	-4.453-002

Table A24b
Pressure Coefficients
$T = 0.3 \quad H = 2.0$

ka	p_1^0		p_2^0		p_3^0		p_1^{90}		p_2^{90}		p_3^{90}	
0.01	2.586-009	-8.500-003	9.127-010	-3.000-003	3.499-009	-1.150-002	2.513-009	-8.500-003	8.986-010	-3.000-003	3.400-009	-1.150-002
0.05	1.610-006	-4.256-002	5.673-007	-1.499-002	2.174-006	-5.739-002	1.589-006	-4.245-002	5.602-007	-1.497-002	2.146-006	-5.745-002
0.10	2.545-005	-8.546-002	8.922-006	-2.992-002	3.415-005	-1.141-001	2.535-005	-8.461-002	8.889-006	-2.974-002	3.402-005	-1.146-001
0.15	1.262-004	-1.291-001	4.387-005	-4.475-002	1.676-004	-1.696-001	1.277-004	-1.262-001	4.440-005	-4.412-002	1.696-004	-1.713-001
0.20	3.873-004	-1.739-001	1.331-004	-5.943-002	5.070-004	-2.232-001	4.011-004	-1.669-001	1.378-004	-5.793-002	5.248-004	-2.271-001
0.30	1.795-003	-2.694-001	5.959-004	-8.836-002	2.255-003	-3.228-001	2.003-003	-2.447-001	6.643-004	-8.313-002	2.507-003	-3.357-001
0.40	4.932-003	-3.788-001	1.558-003	-1.170-001	5.848-003	-4.094-001	6.280-003	-3.157-001	1.977-003	-1.041-001	7.346-003	-4.396-001
0.50	9.511-003	-5.139-001	2.819-003	-1.462-001	1.055-002	-4.806-001	1.548-002	-3.775-001	4.536-003	-1.198-001	1.641-002	-5.386-001
0.60	1.177-002	-6.968-001	3.268-003	-1.779-001	1.287-002	-5.334-001	3.360-002	-4.270-001	8.934-003	-1.293-001	3.088-002	-6.336-001
0.70	-4.603-003	-9.731-001	-5.952-004	-2.158-001	3.725-003	-5.622-001	6.958-002	-4.590-001	1.623-002	-1.319-001	5.172-002	-7.271-001
0.80	-1.115-001	-1.447+000	-2.033-002	-2.667-001	-3.795-002	-5.474-001	1.490-001	-4.669-001	2.905-002	-1.275-001	7.919-002	-8.255-001
0.90	-7.039-001	-2.326+000	-1.029-001	-3.330-001	-1.460-001	-3.949-001	3.622-001	-4.728-001	5.489-002	-1.218-001	1.046-001	-9.483-001
1.00	-3.384+000	-2.325+000	-3.441-001	-2.213-001	1.534-002	2.091-001	7.832-001	-9.012-001	8.184-002	-1.580-001	3.016-002	-1.099+000
1.10	-3.122+000	9.383-001	-1.599-001	7.165-002	8.097-001	7.070-002	2.873-001	-1.430+000	1.709-002	-1.552-001	-3.774-002	-1.037+000
1.20	-1.641+000	1.213+000	7.795-003	2.755-002	9.042-001	-2.252-001	1.198-002	-1.311+000	2.177-003	-9.254-002	2.813-002	-1.041+000
1.30	-1.047+000	1.003+000	6.925-002	-2.190-002	9.211-001	-2.934-001	-5.829-002	-1.230+000	5.342-003	-3.464-002	7.409-002	-1.082+000
1.40	-7.632-001	8.266-001	1.017-001	-5.285-002	9.545-001	-2.793-001	-8.661-002	-1.187+000	1.136-002	2.539-002	1.034-001	-1.125+000
1.50	-5.991-001	6.985-001	1.234-001	-7.224-002	9.997-001	-2.271-001	-1.054-001	-1.158+000	1.868-002	9.073-002	1.212-001	-1.160+000
1.60	-4.898-001	6.034-001	1.395-001	-8.422-002	1.049+000	-1.522-001	-1.222-001	-1.129+000	2.753-002	1.618-001	1.296-001	-1.185+000
1.70	-4.095-001	5.298-001	1.514-001	-9.076-002	1.096+000	-6.168-002	-1.383-001	-1.093+000	3.827-002	2.376-001	1.299-001	-1.196+000
1.80	-3.465-001	4.704-001	1.597-001	-9.280-002	1.138+000	4.057-002	-1.527-001	-1.047+000	5.097-002	3.165-001	1.235-001	-1.193+000
1.90	-2.950-001	4.208-001	1.645-001	-9.073-002	1.170+000	1.516-001	-1.639-001	-9.910-001	6.525-002	3.965-001	1.123-001	-1.173+000
2.00	-2.517-001	3.784-001	1.659-001	-8.475-002	1.190+000	2.690-001	-1.701-001	-9.240-001	8.022-002	4.753-001	9.816-002	-1.136+000
2.10	-2.148-001	3.416-001	1.642-001	-7.500-002	1.196+000	3.911-001	-1.702-001	-8.479-001	9.455-002	5.511-001	8.326-002	-1.083+000
2.20	-1.830-001	3.096-001	1.595-001	-6.163-002	1.185+000	5.159-001	-1.636-001	-7.651-001	1.067-001	6.223-001	6.919-002	-1.015+000
2.30	-1.552-001	2.818-001	1.520-001	-4.497-002	1.158+000	6.418-001	-1.505-001	-6.780-001	1.153-001	6.878-001	5.701-002	-9.346-001
2.40	-1.306-001	2.578-001	1.419-001	-2.493-002	1.113+000	7.670-001	-1.320-001	-5.890-001	1.191-001	7.470-001	4.711-002	-8.431-001
2.50	-1.085-001	2.370-001	1.292-001	-2.048-003	1.050+000	8.899-001	-1.095-001	-5.002-001	1.174-001	7.996-001	3.938-002	-7.429-001
2.60	-8.853-002	2.191-001	1.142-001	2.353-002	9.697-001	1.008+000	-8.501-002	-4.132-001	1.100-001	8.456-001	3.334-002	-6.359-001
2.70	-7.028-002	2.035-001	9.704-002	5.176-002	8.730-001	1.121+000	-6.049-002	-3.292-001	9.707-002	8.837-001	2.831-002	-5.238-001
2.80	-5.376-002	1.898-001	7.811-002	8.238-002	7.611-001	1.225+000	-3.801-002	-2.488-001	7.959-002	9.143-001	2.357-002	-4.078-001
2.90	-3.921-002	1.776-001	5.794-002	1.152-001	6.355-001	1.319+000	-1.950-002	-1.722-001	5.860-002	9.361-001	1.843-002	-2.894-001
3.00	-2.714-002	1.667-001	3.718-002	1.499-001	4.980-001	1.400+000	-6.593-003	-9.908-002	3.526-002	9.476-001	1.220-002	-1.697-001
3.10	-1.818-002	1.574-001	1.658-002	1.859-001	3.506-001	1.467+000	-4.394-004	-2.868-002	1.055-002	9.469-001	4.108-003	-4.975-002
3.20	-1.295-002	1.503-001	-3.208-003	2.223-001	1.954-001	1.516+000	-1.480-003	3.985-002	-1.508-002	9.317-001	-6.678-003	6.960-002
3.30	-1.183-002	1.464-001	-2.177-002	2.580-001	3.410-002	1.547+000	-9.394-003	1.072-001	-4.185-002	8.999-001	-2.102-002	1.879-001
3.40	-1.484-002	1.472-001	-3.903-002	2.921-001	-1.314-001	1.556+000	-2.328-002	1.734-001	-7.060-002	8.498-001	-3.957-002	3.052-001
3.50	-2.160-002	1.538-001	-5.522-002	3.238-001	-2.993-001	1.543+000	-4.211-002	2.374-001	-1.026-001	7.803-001	-6.248-002	4.220-001
3.60	-3.151-002	1.678-001	-7.064-002	3.525-001	-4.681-001	1.507+000	-6.530-002	2.972-001	-1.391-001	6.913-001	-8.917-002	5.391-001
3.70	-4.390-002	1.905-001	-8.550-002	3.783-001	-6.360-001	1.448+000	-9.330-002	3.500-001	-1.815-001	5.832-001	-1.182-001	6.573-001
3.80	-5.811-002	2.236-001	-9.966-002	4.014-001	-8.009-001	1.366+000	-1.281-001	3.921-001	-2.311-001	4.571-001	-1.472-001	7.769-001
3.90	-7.357-002	2.699-001	-1.126-001	4.223-001	-9.611-001	1.261+000	-1.742-001	4.193-001	-2.893-001	3.146-001	-1.731-001	8.975-001
4.00	-8.954-002	3.335-001	-1.234-001	4.415-001	-1.114+000	1.134+000	-2.393-001	4.272-001	-3.580-001	1.572-001	-1.924-001	1.018+000
4.50	1.336-001	1.735+000	-3.244-002	5.088-001	-1.734+000	2.255-001	-2.341+000	2.222-001	-9.214-001	-5.549-001	-6.391-002	1.461+000
5.00	1.664-001	-6.731-001	-1.896-001	2.875-001	-1.805+000	-7.314-001	1.149+000	1.045+000	-1.019+000	-1.408+000	-4.620-003	1.398+000

Table A25a
Impedance Coefficients
$T = 0.5 \quad H = 2.0$

ka	Z_1		Z_2		Z_3		Z_1		Z_2		Z_3	
0.01	2.237-005	7.696-003	9.995-006	1.148-003	6.253-005	5.447-003	5.000-005	2.539-003	7.480-005	3.416-003	2.991-005	2.901-003
0.05	5.595-004	3.853-002	2.491-004	5.727-003	1.557-003	2.714-002	1.246-003	1.262-002	1.867-003	1.699-002	7.467-004	1.449-002
0.10	2.242-003	7.741-002	9.875-004	1.138-002	6.159-003	5.371-002	4.932-003	2.477-002	7.431-003	3.346-002	2.976-003	2.892-002
0.15	5.059-003	1.170-001	2.189-003	1.689-002	1.360-002	7.916-002	1.091-002	3.601-002	1.659-002	4.888-002	6.655-003	4.323-002
0.20	9.043-003	1.577-001	3.814-003	2.220-002	2.356-002	1.030-001	1.896-002	4.597-002	2.919-002	6.279-002	1.174-002	5.741-002
0.30	2.080-002	2.447-001	8.136-003	3.208-002	4.939-002	1.447-001	4.007-002	6.083-002	6.404-002	8.450-002	2.602-002	8.556-002
0.40	3.880-002	3.440-001	1.357-002	4.090-002	8.003-002	1.772-001	6.577-002	6.771-002	1.110-001	9.581-002	4.588-002	1.143-001
0.50	6.640-002	4.652-001	1.988-002	4.880-002	1.119-001	2.002-001	9.380-002	6.586-002	1.706-001	9.381-002	7.263-002	1.460-001
0.60	1.123-001	6.250-001	2.722-002	5.610-002	1.420-001	2.147-001	1.226-001	5.465-002	2.464-001	7.328-002	1.104-001	1.845-001
0.70	2.003-001	8.568-001	3.651-002	6.315-002	1.670-001	2.214-001	1.512-001	3.218-002	3.472-001	2.105-002	1.706-001	2.368-001
0.80	4.108-001	1.231+000	5.062-002	6.975-002	1.815-001	2.216-001	1.786-001	-8.147-003	4.901-001	-1.037-001	2.874-001	3.131-001
0.90	1.106+000	1.865+000	7.847-002	7.023-002	1.693-001	2.220-001	1.920-001	-8.966-002	6.735-001	-4.614-001	5.867-001	3.958-001
1.00	3.710+000	1.420+000	1.155-001	9.986-003	1.148-001	3.094-001	5.259-002	-2.184-001	1.718-001	-1.448+000	1.303+000	-1.269-001
1.10	2.470+000	-1.999+000	1.950-002	-1.660-002	2.761-001	4.002-001	-5.291-002	-5.870-003	-1.018+000	-4.994-001	4.198-001	-9.853-001
1.20	9.045-001	-1.612+000	2.249-003	3.131-002	3.468-001	3.434-001	4.791-002	3.382-002	-6.341-001	7.351-002	-6.729-003	-6.443-001
1.30	4.723-001	-1.172+000	6.597-003	5.574-002	3.743-001	3.132-001	9.078-002	1.250-002	-3.794-001	1.796-001	-8.511-002	-4.514-001
1.40	3.098-001	-9.096-001	1.283-002	7.173-002	3.959-001	2.947-001	1.065-001	-1.335-002	-2.325-001	1.958-001	-1.092-001	-3.484-001
1.50	2.310-001	-7.433-001	1.984-002	8.438-002	4.161-001	2.797-001	1.084-001	-3.687-002	-1.380-001	1.864-001	-1.227-001	-2.832-001
1.60	1.849-001	-6.300-001	2.791-002	9.502-002	4.352-001	2.651-001	1.018-001	-5.621-002	-7.329-002	1.665-001	-1.333-001	-2.349-001
1.70	1.531-001	-5.475-001	3.714-002	1.038-001	4.525-001	2.497-001	8.991-002	-7.035-002	-2.835-002	1.418-001	-1.420-001	-1.943-001
1.80	1.284-001	-4.837-001	4.729-002	1.104-001	4.675-001	2.331-001	7.530-002	-7.883-002	1.777-003	1.154-001	-1.478-001	-1.575-001
1.90	1.075-001	-4.315-001	5.782-002	1.147-001	4.794-001	2.157-001	6.025-002	-8.188-002	2.032-002	8.971-002	-1.500-001	-1.232-001
2.00	8.938-002	-3.865-001	6.804-002	1.166-001	4.881-001	1.981-001	4.654-002	-8.038-002	2.998-002	6.654-002	-1.480-001	-9.137-002
2.10	7.350-002	-3.463-001	7.731-002	1.166-001	4.937-001	1.811-001	3.529-002	-7.562-002	3.322-002	4.700-002	-1.421-001	-6.248-002
2.20	5.976-002	-3.094-001	8.515-002	1.150-001	4.964-001	1.653-001	2.698-002	-6.893-002	3.226-002	3.150-002	-1.328-001	-3.699-002
2.30	4.803-002	-2.751-001	9.131-002	1.124-001	4.970-001	1.511-001	2.152-002	-6.147-002	2.892-002	1.990-002	-1.208-001	-1.514-002
2.40	3.814-002	-2.428-001	9.570-002	1.094-001	4.958-001	1.387-001	1.853-002	-5.409-002	2.454-002	1.169-002	-1.071-001	3.082-003
2.50	2.986-002	-2.122-001	9.836-002	1.064-001	4.935-001	1.281-001	1.753-002	-4.726-002	2.006-002	6.188-003	-9.209-002	1.781-002
2.60	2.293-002	-1.830-001	9.952-002	1.042-001	4.903-001	1.192-001	1.796-002	-4.130-002	1.601-002	2.731-003	-7.644-002	2.925-002
2.70	1.711-002	-1.549-001	9.926-002	1.026-001	4.868-001	1.120-001	1.963-002	-3.614-002	1.268-002	6.496-004	-6.043-002	3.754-002
2.80	1.223-002	-1.277-001	9.800-002	1.025-001	4.830-001	1.062-001	2.216-002	-3.185-002	1.008-002	-6.032-004	-4.447-002	4.283-002
2.90	8.175-003	-1.010-001	9.609-002	1.039-001	4.792-001	1.018-001	2.552-002	-2.838-002	8.144-003	-1.464-003	-2.895-002	4.519-002
3.00	4.937-003	-7.451-002	9.400-002	1.071-001	4.756-001	9.863-002	2.970-002	-2.578-002	6.647-003	-2.199-003	-1.434-002	4.472-002
3.10	2.583-003	-4.800-002	9.232-002	1.122-001	4.722-001	9.647-002	3.475-002	-2.427-002	5.357-003	-2.920-003	-1.222-003	4.163-002
3.20	1.231-003	-2.132-002	9.165-002	1.192-001	4.692-001	9.521-002	4.059-002	-2.421-002	4.085-003	-3.586-003	9.801-003	3.636-002
3.30	9.918-004	5.603-003	9.265-002	1.277-001	4.667-001	9.472-002	4.698-002	-2.603-002	2.751-003	-4.065-003	1.821-002	2.958-002
3.40	1.914-003	3.275-002	9.585-002	1.374-001	4.645-001	9.495-002	5.336-002	-3.016-002	1.438-003	-4.210-003	2.373-002	2.221-002
3.50	3.945-003	6.011-002	1.017-001	1.475-001	4.628-001	9.588-002	5.895-002	-3.685-002	3.437-004	-3.973-003	2.639-002	1.528-002
3.60	6.923-003	8.774-002	1.104-001	1.572-001	4.617-001	9.748-002	6.275-002	-4.600-002	-3.056-004	-3.475-003	2.664-002	9.802-003
3.70	1.061-002	1.158-001	1.220-001	1.658-001	4.614-001	9.971-002	6.371-002	-5.707-002	-3.515-004	-3.003-003	2.530-002	6.614-003
3.80	1.476-002	1.447-001	1.362-001	1.721-001	4.622-001	1.024-001	6.102-002	-6.901-002	1.690-004	-2.956-003	2.350-002	6.231-003
3.90	1.918-002	1.751-001	1.524-001	1.752-001	4.642-001	1.053-001	5.430-002	-8.037-002	9.670-004	-3.702-003	2.257-002	8.708-003
4.00	2.379-002	2.077-001	1.696-001	1.750-001	4.675-001	1.080-001	4.376-002	-8.967-002	1.538-003	-5.426-003	2.377-002	1.342-002
4.50	5.952-002	4.544-001	2.267-001	1.244-001	4.943-001	1.042-001	-1.651-002	-7.952-002	-1.324-002	-1.678-002	8.479-002	3.438-002
5.00	3.357-001	1.446+000	2.158-001	6.729-002	5.067-001	8.040-002	-2.116-002	-3.722-002	-5.484-002	1.075-002	3.043-001	-6.964-002

Table A25b
Pressure Coefficients
$T = 0.5 \quad H = 2.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	3.765-009 -7.500-003	2.510-009 -5.000-003	6.275-009 -1.250-002	3.719-009 -7.500-003	2.499-009 -4.999-003	6.198-009 -1.250-002
0.05	2.345-006 -3.754-002	1.561-006 -2.498-002	3.901-006 -6.235-002	2.339-006 -3.744-002	1.556-006 -2.493-002	3.889-006 -6.243-002
0.10	3.713-005 -7.536-002	2.458-005 -4.981-002	6.135-005 -1.238-001	3.723-005 -7.451-002	2.465-005 -4.947-002	6.152-005 -1.245-001
0.15	1.847-004 -1.137-001	1.212-004 -7.438-002	3.019-004 -1.836-001	1.870-004 -1.109-001	1.227-004 -7.321-002	3.056-004 -1.858-001
0.20	5.699-004 -1.531-001	3.691-004 -9.859-002	9.171-004 -2.409-001	5.849-004 -1.462-001	3.788-004 -9.580-002	9.410-004 -2.461-001
0.30	2.694-003 -2.368-001	1.682-003 -1.458-001	4.148-003 -3.455-001	2.891-003 -2.122-001	1.803-003 -1.362-001	4.437-003 -3.627-001
0.40	7.738-003 -3.326-001	4.579-003 -1.919-001	1.118-002 -4.334-001	8.956-003 -2.698-001	5.284-003 -1.683-001	1.280-002 -4.736-001
0.50	1.654-002 -4.515-001	9.115-003 -2.382-001	2.204-002 -5.017-001	2.182-002 -3.159-001	1.192-002 -1.901-001	2.808-002 -5.796-001
0.60	2.784-002 -6.137-001	1.402-002 -2.880-001	3.397-002 -5.477-001	4.687-002 -3.455-001	2.306-002 -2.001-001	5.185-002 -6.828-001
0.70	3.214-002 -8.620-001	1.484-002 -3.473-001	3.925-002 -5.660-001	9.637-002 -3.500-001	4.116-002 -1.965-001	8.511-002 -7.874-001
0.80	-1.904-002 -1.299+000	-3.483-003 -4.284-001	1.980-002 -5.401-001	2.065-001 -3.141-001	7.262-002 -1.786-001	1.278-001 -9.029-001
0.90	-4.289-001 -2.185+000	-1.064-001 -5.491-001	-5.804-002 -3.918-001	5.174-001 -2.402-001	1.383-001 -1.560-001	1.685-001 -1.059+000
1.00	-3.126+000 -2.914+000	-5.352-001 -4.621-001	7.387-002 2.183-001	1.369+000 -7.680-001	1.430-001 -2.491-001	5.425-002 -1.281+000
1.10	-3.323+000 1.017+000	-2.593-001 1.197-001	9.376-001 5.079-002	5.111-001 -1.877+000	4.780-002 -2.902-001	-6.422-002 -1.121+000
1.20	-1.633+000 1.296+000	4.271-002 2.791-002	9.660-001 -2.390-001	-1.184-002 -1.600+000	6.288-003 -1.299-001	6.768-002 -1.118+000
1.30	-1.016+000 1.054+000	1.429-001 -6.244-002	9.617-001 -2.612-001	-1.353-001 -1.429+000	2.066-002 6.823-004	1.426-001 -1.186+000
1.40	-7.311-001 8.693-001	1.942-001 -1.180-001	9.889-001 -2.043-001	-1.904-001 -1.340+000	4.425-002 1.284-001	1.839-001 -1.256+000
1.50	-5.653-001 7.388-001	2.272-001 -1.538-001	1.031+000 -1.132-001	-2.315-001 -1.278+000	7.423-002 2.626-001	2.027-001 -1.317+000
1.60	-4.535-001 6.417-001	2.495-001 -1.767-001	1.077+000 -2.567-003	-2.686-001 -1.219+000	1.116-001 4.033-001	2.032-001 -1.364+000
1.70	-3.705-001 5.644-001	2.631-001 -1.896-001	1.119+000 1.202-001	-3.013-001 -1.153+000	1.565-001 5.469-001	1.888-001 -1.390+000
1.80	-3.056-001 4.994-001	2.694-001 -1.933-001	1.151+000 2.504-001	-3.260-001 -1.075+000	2.072-001 6.883-001	1.641-001 -1.392+000
1.90	-2.539-001 4.429-001	2.693-001 -1.879-001	1.170+000 3.845-001	-3.391-001 -9.858-001	2.599-001 8.226-001	1.342-001 -1.369+000
2.00	-2.122-001 3.929-001	2.639-001 -1.739-001	1.171+000 5.202-001	-3.383-001 -8.887-001	3.093-001 9.464-001	1.044-001 -1.321+000
2.10	-1.785-001 3.487-001	2.542-001 -1.517-001	1.152+000 6.554-001	-3.236-001 -7.879-001	3.503-001 1.058+000	7.851-002 -1.252+000
2.20	-1.510-001 3.099-001	2.411-001 -1.225-001	1.112+000 7.886-001	-2.966-001 -6.875-001	3.787-001 1.159+000	5.849-002 -1.165+000
2.30	-1.280-001 2.761-001	2.248-001 -8.714-002	1.050+000 9.180-001	-2.602-001 -5.906-001	3.915-001 1.248+000	4.468-002 -1.065+000
2.40	-1.081-001 2.467-001	2.056-001 -4.664-002	9.660-001 1.042+000	-2.178-001 -4.993-001	3.878-001 1.328+000	3.619-002 -9.550-001
2.50	-9.022-002 2.211-001	1.833-001 -1.718-003	8.517-001 1.157+000	-1.729-001 -4.147-001	3.679-001 1.400+000	3.154-002 -8.375-001
2.60	-7.372-002 1.982-001	1.581-001 4.689-002	7.386-001 1.263+000	-1.284-001 -3.369-001	3.335-001 1.463+000	2.911-002 -7.143-001
2.70	-5.821-002 1.774-001	1.299-001 9.928-002	5.988-001 1.356+000	-8.736-002 -2.658-001	2.863-001 1.517+000	2.743-002 -5.870-001
2.80	-4.371-002 1.578-001	9.928-002 1.549-001	4.447-001 1.434+000	-5.220-002 -2.006-001	2.298-001 1.559+000	2.530-002 -4.566-001
2.90	-3.058-002 1.388-001	6.678-002 2.135-001	2.792-001 1.494+000	-2.508-002 -1.400-001	1.667-001 1.588+000	2.165-002 -3.241-001
3.00	-1.945-002 1.200-001	3.345-002 2.750-001	1.053-001 1.534+000	-7.538-003 -8.209-002	9.949-002 1.598+000	1.544-002 -1.993-001
3.10	-1.109-002 1.015-001	4.943-004 3.385-001	-7.403-002 1.552+000	-1.717-004 -2.447-002	2.975-002 1.585+000	5.522-003 -5.596-002
3.20	-6.275-003 8.364-002	-3.081-002 4.032-001	-2.558-001 1.546+000	-2.336-003 3.531-002	-4.280-002 1.542+000	-9.378-003 7.872-002
3.30	-5.534-003 6.739-002	-5.926-002 4.678-001	-4.374-001 1.513+000	-1.200-002 9.919-002	-1.206-001 1.463+000	-3.033-002 2.144-001
3.40	-9.057-003 5.383-002	-8.384-002 5.309-001	-6.164-001 1.452+000	-2.602-002 1.679-001	-2.082-001 1.345+000	-5.764-002 3.527-001
3.50	-1.661-002 4.411-002	-1.037-001 5.910-001	-7.908-001 1.364+000	-4.082-002 2.404-001	-3.121-001 1.186+000	-9.014-002 4.958-001
3.60	-2.760-002 3.935-002	-1.180-001 6.466-001	-9.588-001 1.247+000	-5.338-002 3.136-001	-4.397-001 9.879-001	-1.247-001 6.459-001
3.70	-4.110-002 4.049-002	-1.262-001 6.958-001	-1.119+000 1.104+000	-6.224-002 3.829-001	-5.980-001 7.566-001	-1.559-001 8.039-001
3.80	-5.592-002 4.822-002	-1.277-001 7.366-001	-1.269+000 9.363-001	-6.837-002 4.432-001	-7.919-001 5.027-001	-1.771-001 9.678-001
3.90	-7.064-002 6.289-002	-1.228-001 7.668-001	-1.408+000 7.483-001	-7.551-002 4.896-001	-1.022+000 2.406-001	-1.818-001 1.132+000
4.00	-8.381-002 8.445-002	-1.120-001 7.849-001	-1.533+000 5.439-001	-8.972-002 5.199-001	-1.284+000 -1.721-002	-1.657-001 1.289+000
4.50	-1.016-001 2.749-001	-6.073-002 6.649-001	-1.833+000 -5.694-001	-4.655-001 5.521-001	-2.494+000 -8.939-001	9.367-002 1.667+000
5.00	-5.476-002 8.858-001	-3.538-002 3.629-001	-1.388+000 -1.555+000	-1.822+000 1.165+000	-2.587+000 -1.516+000	1.325-001 1.434+000

Table A26a
Impedance Coefficients
$T = 0.05 \quad H = 3.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	6.926-005	1.769-002	8.180-008	1.362-005	7.763-005	6.335-003	5.040-006	2.570-004	1.467-004	6.952-003	4.760-006	4.506-004
0.05	1.737-003	8.870-002	2.041-006	6.801-005	1.936-003	3.157-002	1.257-004	1.278-003	3.667-003	3.465-002	1.191-004	2.254-003
0.10	7.015-003	1.790-001	8.113-006	1.355-004	7.684-003	6.250-002	4.994-004	2.514-003	1.468-002	6.857-002	4.771-004	4.515-003
0.15	1.606-002	2.725-001	1.807-005	2.021-004	1.707-002	9.217-002	1.111-003	3.665-003	3.311-002	1.011-001	1.077-003	6.793-003
0.20	2.928-002	3.713-001	3.172-005	2.673-004	2.982-002	1.200-001	1.945-003	4.695-003	5.909-002	1.314-001	1.927-003	9.106-003
0.30	7.172-002	5.958-001	6.918-005	3.929-004	6.388-002	1.681-001	4.201-003	6.255-003	1.352-001	1.832-001	4.455-003	1.397-002
0.40	1.486-001	8.867-001	1.198-004	5.125-004	1.063-001	2.035-001	7.117-003	6.964-003	2.503-001	2.176-001	8.437-003	1.958-002
0.50	3.045-001	1.318+000	1.884-004	6.292-004	1.530-001	2.227-001	1.065-002	6.567-003	4.265-001	2.224-001	1.514-002	2.703-002
0.60	7.216-001	2.080+000	3.007-004	7.478-004	1.975-001	2.192-001	1.509-002	4.347-003	7.335-001	1.483-001	2.944-002	3.878-002
0.70	2.636+000	3.601+000	5.888-004	8.168-004	2.085-001	1.711-001	2.092-002	-4.159-003	1.379+000	-3.890-001	7.874-002	5.415-002
0.80	7.362+000	-2.759+000	5.322-004	2.231-005	6.727-002	2.963-001	-2.855-003	-1.772-002	-4.196-001	-2.318+000	1.250-001	-1.069-001
0.90	1.398+000	-3.268+000	5.488-006	4.996-004	2.602-001	3.606-001	1.769-004	1.736-003	-9.011-001	-3.875-001	3.430-003	-7.353-002
1.00	4.692-001	-2.029+000	2.593-005	7.618-004	3.311-001	3.255-001	5.476-003	2.470-003	-5.206-001	-2.725-002	-6.135-003	-4.287-002
1.10	2.380-001	-1.439+000	6.031-005	9.261-004	3.717-001	2.970-001	7.584-003	1.258-003	-3.201-001	6.000-002	-7.087-003	-3.000-002
1.20	1.509-001	-1.105+000	9.519-005	1.065-003	4.004-001	2.715-001	8.291-003	-9.731-005	-2.027-001	8.152-002	-7.201-003	-2.302-002
1.30	1.082-001	-8.900-001	1.365-004	1.195-003	4.213-001	2.477-001	8.252-003	-1.243-003	-1.280-001	8.026-002	-7.377-003	-1.839-002
1.40	8.251-002	-7.378-001	1.889-004	1.318-003	4.360-001	2.254-001	7.793-003	-2.063-003	-7.956-002	6.981-002	-7.638-003	-1.479-002
1.50	6.413-002	-6.219-001	2.551-004	1.432-003	4.457-001	2.051-001	7.144-003	-2.533-003	-4.824-002	5.645-002	-7.859-003	-1.165-002
1.60	4.919-002	-5.282-001	3.350-004	1.531-003	4.513-001	1.871-001	6.472-003	-2.684-003	-2.843-002	4.341-002	-7.894-003	-8.708-003
1.70	3.624-002	-4.484-001	4.259-004	1.610-003	4.538-001	1.718-001	5.893-003	-2.593-003	-1.633-002	3.225-002	-7.615-003	-5.880-003
1.80	2.483-002	-3.774-001	5.224-004	1.663-003	4.540-001	1.593-001	5.468-003	-2.358-003	-8.992-003	2.358-002	-6.918-003	-3.182-003
1.90	1.499-002	-3.118-001	6.162-004	1.685-003	4.529-001	1.495-001	5.200-003	-2.083-003	-4.080-003	1.729-002	-5.724-003	-6.946-004
2.00	7.139-003	-2.494-001	6.956-004	1.674-003	4.509-001	1.424-001	5.033-003	-1.846-003	-1.507-004	1.254-002	-3.989-003	1.436-003
2.10	1.990-003	-1.885-001	7.445-004	1.631-003	4.488-001	1.378-001	4.865-003	-1.673-003	3.732-003	8.166-003	-1.720-003	2.989-003
2.20	7.338-004	-1.286-001	7.424-004	1.567-003	4.470-001	1.357-001	4.589-003	-1.474-003	7.110-003	2.810-003	9.442-004	3.656-003
2.30	4.789-003	-6.988-002	6.719-004	1.511-003	4.465-001	1.358-001	4.210-003	-1.046-003	8.337-003	-4.061-003	3.585-003	3.123-003
2.40	1.456-002	-1.469-002	5.393-004	1.509-003	4.482-001	1.376-001	3.982-003	-2.056-004	5.449-003	-1.081-002	5.440-003	1.405-003
2.50	2.765-002	3.468-002	3.924-004	1.595-003	4.526-001	1.394-001	4.322-003	8.922-004	-1.124-003	-1.391-002	5.846-003	-7.877-004
2.60	3.986-002	7.886-002	2.890-004	1.749-003	4.590-001	1.398-001	5.344-003	1.735-003	-7.627-003	-1.154-002	4.941-003	-2.431-003
2.70	4.882-002	1.215-001	2.458-004	1.925-003	4.661-001	1.383-001	6.704-003	1.936-003	-1.055-002	-5.680-003	3.481-003	-3.067-003
2.80	5.487-002	1.462-001	2.440-004	2.090-003	4.729-001	1.352-001	7.968-003	1.499-003	-9.253-003	4.509-004	2.060-003	-2.867-003
2.90	5.930-002	2.153-001	2.620-004	2.239-003	4.792-001	1.311-001	8.891-003	6.367-004	-5.001-003	4.781-003	8.767-004	-2.133-003
3.00	6.312-002	2.706-001	2.889-004	2.380-003	4.847-001	1.262-001	9.400-003	-4.270-004	6.656-004	6.579-003	-7.533-005	-1.038-003
3.10	6.705-002	3.342-001	3.227-004	2.517-003	4.895-001	1.207-001	9.516-003	-1.516-003	6.524-003	5.886-003	-8.315-004	3.805-004
3.20	7.167-002	4.093-001	3.653-004	2.654-003	4.935-001	1.148-001	9.302-003	-2.505-003	1.174-002	3.077-003	-1.388-003	2.164-003
3.30	7.775-002	5.008-001	4.201-004	2.791-003	4.965-001	1.087-001	8.843-003	-3.313-003	1.582-002	-1.362-003	-1.687-003	4.398-003
3.40	8.666-002	6.167-001	4.896-004	2.927-003	4.986-001	1.024-001	8.230-003	-3.896-003	1.850-002	-6.978-003	-1.612-003	7.202-003
3.50	1.010-001	7.709-001	5.753-004	3.059-003	4.997-001	9.635-002	7.552-003	-4.241-003	1.986-002	-1.345-002	-9.709-004	1.076-002
3.60	1.264-001	9.900-001	6.784-004	3.184-003	4.999-001	9.070-002	6.895-003	-4.366-003	2.028-002	-2.078-002	5.627-004	1.539-002
3.70	1.777-001	1.332+000	8.008-004	3.301-003	4.993-001	8.563-002	6.324-003	-4.318-003	2.005-002	-2.978-002	3.663-003	2.184-002
3.80	3.048-001	1.955+000	9.508-004	3.412-003	4.980-001	8.134-002	5.882-003	-4.176-003	1.976-002	-4.339-002	1.022-002	3.207-002
3.90	7.961-001	3.475+000	1.172-003	3.530-003	4.964-001	7.804-002	5.546-003	-4.097-003	1.816-002	-7.449-002	2.886-002	5.332-002
4.00	9.164+000	9.834+000	2.005-003	3.436-003	4.956-001	7.715-002	4.113-003	-4.659-003	-9.700-002	-2.393-001	2.002-001	9.297-002
4.50	6.120-003	-7.947-001	1.893-003	3.259-003	4.872-001	7.223-002	6.144-003	-4.729-003	1.762-002	-7.916-003	6.067-003	3.373-003
5.00	9.849-002	-4.064-001	4.552-004	3.683-003	5.025-001	7.019-002	8.105-003	-1.410-003	-3.049-002	3.537-002	-8.970-003	-2.061-002

Table A26b
Pressure Coefficients
$T = 0.05 \quad H = 3.0$

ka	p_1^0		p_2^0		p_3^0		p_1^{90}		p_2^{90}		p_3^{90}	
0.01	1.246-009	-1.463-002	4.258-011	-5.000-004	1.309-009	-1.537-002	1.009-009	-1.462-002	3.742-011	-4.999-004	1.060-009	-1.537-002
0.05	7.607-007	-7.334-002	2.594-008	-2.500-003	7.974-007	-7.676-002	6.839-007	-7.304-002	2.332-008	-2.492-003	7.169-007	-7.680-002
0.10	1.127-005	-1.480-001	3.812-007	-5.002-003	1.171-005	-1.529-001	1.093-005	-1.456-001	3.698-007	-4.938-003	1.136-005	-1.531-001
0.15	4.912-005	-2.255-001	1.640-006	-7.508-003	5.036-005	-2.277-001	5.526-005	-2.172-001	1.845-006	-7.290-003	5.656-005	-2.285-001
0.20	1.183-004	-3.076-001	3.879-006	-1.003-002	1.193-004	-3.007-001	1.746-004	-2.873-001	5.718-006	-9.505-003	1.748-004	-3.025-001
0.30	-1.749-005	-4.954-001	-3.930-007	-1.516-002	6.806-006	-4.390-001	8.903-004	-4.214-001	2.753-005	-1.335-002	8.325-004	-4.446-001
0.40	-3.738-003	-7.428-001	-1.043-004	-2.067-002	-2.886-003	-5.645-001	2.915-003	-5.439-001	8.253-005	-1.615-002	2.436-003	-5.764-001
0.50	-2.832-002	-1.121+000	-6.943-004	-2.717-002	-1.821-002	-6.739-001	7.884-003	-6.509-001	1.958-004	-1.764-002	5.480-003	-6.954-001
0.60	-1.704-001	-1.828+000	-3.445-003	-3.632-002	-7.939-002	-7.554-001	2.107-002	-7.367-001	4.310-004	-1.758-002	1.065-002	-8.000-001
0.70	-1.306+000	-3.518+000	-1.954-002	-5.154-002	-3.142-001	-6.822-001	7.232-002	-7.975-001	1.090-003	-1.590-002	1.881-002	-8.932-001
0.80	-6.665+000	3.446-001	-5.790-002	4.673-003	2.599-001	2.397-001	1.380-001	-1.030+000	1.210-003	-1.444-002	-3.446-003	-9.745-001
0.90	-2.045+000	2.259+000	-2.628-003	5.343-003	7.824-001	-4.980-001	3.009-003	-1.048+000	1.470-005	-8.517-003	7.159-004	-9.977-001
1.00	-9.806-001	1.508+000	7.253-003	-7.764-003	7.887-001	-7.066-001	-1.037-002	-1.037+000	7.888-005	-1.219-003	8.685-003	-1.019+000
1.10	-6.338-001	1.095+000	1.114-002	-1.468-002	8.387-001	-7.724-001	-1.261-002	-1.021+000	2.017-004	7.449-003	1.290-002	-1.020+000
1.20	-4.659-001	8.485-001	1.375-002	-1.907-002	9.160-001	-7.878-001	-1.352-002	-9.900-001	3.393-004	1.743-002	1.486-002	-9.991-001
1.30	-3.627-001	6.833-001	1.585-002	-2.217-002	1.007+000	-7.739-001	-1.423-002	-9.393-001	5.027-004	2.846-002	1.516-002	-9.553-001
1.40	-2.895-001	5.635-001	1.758-002	-2.446-002	1.104+000	-7.371-001	-1.467-002	-8.686-001	6.963-004	4.020-002	1.421-002	-8.895-001
1.50	-2.321-001	4.709-001	1.893-002	-2.616-002	1.201+000	-6.802-001	-1.451-002	-7.792-001	9.080-004	5.221-002	1.248-002	-8.029-001
1.60	-1.835-001	3.953-001	1.983-002	-2.737-002	1.294+000	-6.048-001	-1.344-002	-6.728-001	1.104-003	6.404-002	1.039-002	-6.976-001
1.70	-1.404-001	3.307-001	2.019-002	-2.813-002	1.381+000	-5.115-001	-1.132-002	-5.522-001	1.232-003	7.521-002	8.231-003	-5.761-001
1.80	-1.010-001	2.727-001	1.986-002	-2.846-002	1.457+000	-4.007-001	-8.305-003	-4.204-001	1.226-003	8.527-002	6.149-003	-4.414-001
1.90	-6.463-002	2.176-001	1.863-002	-2.828-002	1.521+000	-2.726-001	-4.854-003	-2.809-001	1.027-003	9.380-002	4.120-003	-2.968-001
2.00	-3.219-002	1.620-001	1.627-002	-2.740-002	1.570+000	-1.263-001	-1.736-003	-1.370-001	5.988-004	1.004-001	2.043-003	-1.457-001
2.10	-6.529-003	1.022-001	1.253-002	-2.538-002	1.603+000	3.835-002	4.611-005	8.123-003	-4.009-005	1.049-001	-1.220-004	8.678-003
2.20	5.442-003	3.697-002	7.429-003	-2.138-002	1.624+000	2.228-001	-5.201-004	1.521-001	-7.858-004	1.070-001	-2.224-003	1.628-001
2.30	-6.259-003	-2.913-002	1.766-003	-1.432-002	1.637+000	4.255-001	-3.848-003	2.932-001	-1.431-003	1.064-001	-4.018-003	3.128-001
2.40	-4.780-002	-8.043-002	-2.441-003	-3.791-003	1.651+000	6.380-001	-8.756-003	4.302-001	-1.747-003	1.027-001	-5.715-003	4.547-001
2.50	-1.088-001	-9.694-002	-2.995-003	8.532-003	1.663+000	8.444-001	-1.242-002	5.606-001	-1.710-003	9.562-002	-8.498-003	5.848-001
2.60	-1.646-001	-7.440-002	1.351-004	1.959-002	1.664+000	1.033+000	-1.274-002	6.794-001	-1.576-003	8.483-002	-1.360-002	7.014-001
2.70	-1.986-001	-2.804-002	4.791-003	2.765-002	1.639+000	1.203+000	-1.007-002	7.814-001	-1.596-003	7.053-002	-2.078-002	8.035-001
2.80	-2.112-001	2.532-002	8.932-003	3.304-002	1.583+000	1.363+000	-5.933-003	8.635-001	-1.816-003	5.308-002	-2.860-002	8.898-001
2.90	-2.100-001	7.751-002	1.169-002	3.481-002	1.498+000	1.515+000	-1.411-003	9.238-001	-2.167-003	3.288-002	-3.554-002	9.583-001
3.00	-2.020-001	1.272-001	1.297-002	3.979-002	1.387+000	1.660+000	2.984-003	9.612-001	-2.584-003	1.033-002	-4.051-002	1.007+000
3.10	-1.918-001	1.763-001	1.299-002	4.248-002	1.253+000	1.797+000	6.923-003	9.749-001	-3.045-003	-1.409-002	-4.299-002	1.034+000
3.20	-1.820-001	2.274-001	1.196-002	4.513-002	1.098+000	1.924+000	9.982-003	9.642-001	-3.552-003	-3.980-002	-4.288-002	1.037+000
3.30	-1.740-001	2.842-001	1.012-002	4.788-002	9.257-001	2.038+000	1.156-002	9.295-001	-4.110-003	-6.614-002	-4.050-002	1.016+000
3.40	-1.691-001	3.515-001	7.664-003	5.080-002	7.369-001	2.137+000	1.093-002	8.713-001	-4.700-003	-9.236-002	-3.641-002	9.714-001
3.50	-1.681-001	4.369-001	4.769-003	5.398-002	5.340-001	2.218+000	7.324-003	7.911-001	-5.275-003	-1.177-001	-3.130-002	9.034-001
3.60	-1.717-001	5.542-001	1.633-003	5.753-002	3.189-001	2.280+000	-2.351-005	6.910-001	-5.756-003	-1.413-001	-2.582-002	8.137-001
3.70	-1.808-001	7.329-001	-1.496-003	6.166-002	9.387-002	2.320+000	-1.214-002	5.729-001	-6.048-003	-1.624-001	-2.047-002	7.049-001
3.80	-1.919-001	1.054+000	-4.164-003	6.698-002	-1.391-001	2.337+000	-3.167-002	4.377-001	-6.068-003	-1.804-001	-1.547-002	5.797-001
3.90	-1.484-001	1.840+000	-4.678-003	7.579-002	-3.802-001	2.327+000	-7.189-002	2.803-001	-5.850-003	-1.946-001	-1.062-002	4.415-001
4.00	2.957+000	5.877+000	2.976-002	9.957-002	-6.800-001	2.282+000	-3.380-001	1.242-001	-6.836-003	-2.037-001	-3.673-003	2.919-001
4.50	1.775-002	1.134-001	-4.536-003	8.459-002	-1.687+000	1.760+000	1.935-002	-4.304-001	1.169-002	-1.808-001	1.618-002	-4.781-001
5.00	5.669-001	-4.160-001	-3.886-002	-3.033-003	-2.650+000	7.766-001	-7.638-002	-1.063+000	8.511-003	-3.397-002	5.604-002	-9.778-001

Table A27a
Impedance Coefficients
$T = 0.1 \quad H = 3.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	6.551-005	1.798-002	3.224-007	4.811-005	8.004-005	6.469-003	1.016-005	5.023-004	1.448-004	6.520-003	9.191-006	8.808-004
0.05	1.643-003	9.015-002	8.042-006	2.402-004	1.996-003	3.224-002	2.534-004	2.497-003	3.621-003	3.248-002	2.299-004	4.407-003
0.10	6.640-003	1.820-001	3.195-005	4.784-004	7.914-003	6.378-002	1.006-003	4.904-003	1.450-002	6.420-002	9.211-004	8.833-003
0.15	1.521-002	2.775-001	7.110-005	7.128-004	1.756-002	9.399-002	2.235-003	7.136-003	3.268-002	9.444-002	2.080-003	1.330-002
0.20	2.778-002	3.789-001	1.246-004	9.420-004	3.061-002	1.223-001	3.905-003	9.114-003	5.831-002	1.225-001	3.721-003	1.787-002
0.30	6.847-002	6.118-001	2.710-004	1.382-003	6.526-002	1.709-001	8.402-003	1.204-002	1.335-001	1.692-001	8.614-003	2.757-002
0.40	1.438-001	9.205-001	4.686-004	1.801-003	1.079-001	2.064-001	1.417-002	1.323-002	2.478-001	1.979-001	1.641-002	3.908-002
0.50	3.038-001	1.395+000	7.404-004	2.216-003	1.541-001	2.255-001	2.115-002	1.216-002	4.262-001	1.948-001	2.998-002	5.514-002
0.60	7.731-001	2.288+000	1.212-003	2.658-003	1.964-001	2.214-001	3.009-002	7.175-003	7.516-001	9.940-002	6.118-002	8.237-002
0.70	3.436+000	4.164+000	2.633-003	2.818-003	1.906-001	1.712-001	4.139-002	-1.406-002	1.465+000	-6.531-001	1.900-001	1.165-001
0.80	5.806+000	-4.540+000	1.115-003	-3.376-004	1.278-001	3.667-001	-1.372-002	-1.898-002	-1.125+000	-1.715+000	1.602-001	-2.524-001
0.90	1.019+000	-3.010+000	2.136-005	1.720-003	2.902-001	3.520-001	4.415-003	5.378-003	-7.972-001	-1.801-001	-3.055-003	-1.284-001
1.00	3.779-001	-1.897+000	1.462-004	2.561-003	3.462-001	3.183-001	1.289-002	4.369-003	-4.513-001	4.262-002	-1.331-002	-7.794-002
1.10	2.052-001	-1.370+000	2.812-004	3.118-003	3.821-001	2.920-001	1.607-002	1.430-003	-2.757-001	9.309-002	-1.413-002	-5.614-002
1.20	1.363-001	-1.066+000	4.235-004	3.601-003	4.088-001	2.681-001	1.688-002	-1.462-003	-1.721-001	9.988-002	-1.437-002	-4.387-002
1.30	1.009-001	-8.674-001	5.979-004	4.053-003	4.287-001	2.453-001	1.637-002	-3.783-003	-1.063-001	9.090-002	-1.487-002	-3.545-002
1.40	7.836-002	-7.253-001	8.220-004	4.477-003	4.428-001	2.237-001	1.513-002	-5.380-003	-6.367-002	7.608-002	-1.551-002	-2.869-002
1.50	6.141-002	-6.161-001	1.103-003	4.856-003	4.521-001	2.038-001	1.360-002	-6.225-003	-3.651-002	6.003-002	-1.598-002	-2.264-002
1.60	4.717-002	-5.272-001	1.435-003	5.169-003	4.574-001	1.862-001	1.210-002	-6.411-003	-1.991-002	4.524-002	-1.600-002	-1.691-002
1.70	3.460-002	-4.510-001	1.804-003	5.394-003	4.596-001	1.711-001	1.084-002	-6.123-003	-1.032-002	3.296-002	-1.532-002	-1.140-002
1.80	2.344-002	-3.829-001	2.184-003	5.511-003	4.596-001	1.588-001	9.943-003	-5.553-003	-4.812-003	2.363-002	-1.376-002	-6.200-003
1.90	1.387-002	-3.199-001	2.540-003	5.507-003	4.582-001	1.493-001	9.375-003	-4.921-003	-1.421-003	1.683-002	-1.120-002	-1.489-003
2.00	6.303-003	-2.599-001	2.823-003	5.375-003	4.561-001	1.425-001	9.009-003	-4.377-003	1.353-003	1.168-002	-7.581-003	2.434-003
2.10	1.500-003	-2.015-001	2.970-003	5.128-003	4.539-001	1.383-001	8.634-003	-3.929-003	4.057-003	6.874-003	-2.947-003	5.121-003
2.20	7.284-004	-1.440-001	2.902-003	4.817-003	4.522-001	1.365-001	8.073-003	-3.369-003	6.101-003	1.181-003	2.382-003	5.938-003
2.30	5.489-003	-8.823-002	2.558-003	4.570-003	4.519-001	1.369-001	7.424-003	-2.289-003	5.702-003	-5.587-003	7.469-003	4.277-003
2.40	1.600-002	-3.667-002	1.989-003	4.577-003	4.540-001	1.384-001	7.291-003	-4.479-004	1.243-003	-1.129-002	1.069-002	3.246-004
2.50	2.935-002	8.214-003	1.413-003	4.943-003	4.584-001	1.397-001	8.413-003	1.634-003	-5.972-003	-1.245-002	1.084-002	-4.255-003
2.60	4.111-002	4.748-002	1.047-003	5.557-003	4.643-001	1.395-001	1.075-002	2.910-003	-1.177-002	-8.248-003	8.508-003	-7.421-003
2.70	4.926-002	8.492-002	9.225-004	6.220-003	4.705-001	1.378-001	1.346-002	2.829-003	-1.325-002	-1.399-003	5.310-003	-8.508-003
2.80	5.441-002	1.238-001	9.510-004	6.829-003	4.765-001	1.351-001	1.577-002	1.583-003	-1.052-002	4.945-003	2.326-003	-8.003-003
2.90	5.782-002	1.661-001	1.053-003	7.378-003	4.820-001	1.315-001	1.731-002	-3.612-004	-5.094-003	9.097-003	-1.501-004	-6.510-003
3.00	6.043-002	2.129-001	1.195-003	7.890-003	4.872-001	1.274-001	1.801-002	-2.578-003	1.507-003	1.060-002	-2.156-003	-4.344-003
3.10	6.276-002	2.658-001	1.371-003	8.385-003	4.918-001	1.226-001	1.795-002	-4.746-003	8.142-003	9.620-003	-3.752-003	-1.579-003
3.20	6.523-002	3.268-001	1.590-003	8.869-003	4.957-001	1.174-001	1.728-002	-6.642-003	1.405-002	6.645-003	-4.913-003	1.834-003
3.30	6.829-002	3.991-001	1.861-003	9.340-003	4.989-001	1.118-001	1.616-002	-8.117-003	1.880-002	2.237-003	-5.523-003	5.985-003
3.40	7.270-002	4.873-001	2.187-003	9.784-003	5.011-001	1.060-001	1.479-002	-9.099-003	2.231-002	-3.028-003	-5.384-003	1.097-002
3.50	7.975-002	5.990-001	2.566-003	1.019-002	5.023-001	1.002-001	1.338-002	-9.582-003	2.477-002	-8.672-003	-4.224-003	1.693-002
3.60	9.189-002	7.473-001	2.992-003	1.055-002	5.026-001	9.481-002	1.208-002	-9.625-003	2.670-002	-1.444-002	-1.663-003	2.408-002
3.70	1.142-001	9.570-001	3.460-003	1.086-002	5.021-001	8.992-002	1.103-002	-9.338-003	2.894-002	-2.048-002	2.926-003	3.292-002
3.80	1.595-001	1.282+000	3.973-003	1.112-002	5.009-001	8.570-002	1.033-002	-8.872-003	3.279-002	-2.778-002	1.086-002	4.466-002
3.90	2.704-001	1.865+000	4.562-003	1.134-002	4.992-001	8.229-002	1.001-002	-8.430-003	4.108-002	-3.944-002	2.583-002	6.256-002
4.00	6.802-001	3.247+000	5.390-003	1.154-002	4.972-001	7.977-002	1.006-002	-8.410-003	6.155-002	-6.895-002	6.391-002	9.811-002
4.50	1.093-002	-1.112+000	6.661-003	1.067-002	4.912-001	7.794-002	1.133-002	-8.663-003	-8.754-003	6.443-003	-5.639-003	-5.606-003
5.00	1.411-001	-4.730-001	1.437-003	1.163-002	5.044-001	7.744-002	1.368-002	-3.569-003	-4.171-002	3.336-002	-1.671-002	-5.354-002

Table A27b
Pressure Coefficients
$T = 0.1 \quad H = 3.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	2.142-009 -1.425-002	1.503-010 -1.000-003	2.367-009 -1.575-002	2.053-009 -1.425-002	1.499-010 -9.999-004	2.269-009 -1.575-002
0.05	1.320-006 -7.148-002	9.238-008 -5.000-003	1.455-006 -7.862-002	1.335-006 -7.116-002	9.340-008 -4.983-003	1.471-006 -7.866-002
0.10	2.619-005 -1.443-001	1.401-006 -1.000-002	2.204-005 -1.565-001	2.133-005 -1.418-001	1.480-006 -9.866-003	2.328-005 -1.568-001
0.15	9.409-005 -2.201-001	6.437-006 -1.501-002	1.012-004 -2.329-001	1.078-004 -2.113-001	7.377-006 -1.455-002	1.158-004 -2.339-001
0.20	2.594-004 -3.007-001	1.740-005 -2.003-002	2.733-004 -3.072-001	3.407-004 -2.791-001	2.283-005 -1.893-002	3.574-004 -3.095-001
0.30	6.817-004 -4.869-001	4.733-005 -3.028-002	6.935-004 -4.472-001	1.741-003 -4.077-001	1.096-004 -2.645-002	1.696-003 -4.543-001
0.40	-1.663-003 -7.373-001	-9.102-005 -4.130-002	-1.133-003 -5.728-001	5.736-003 -5.230-001	3.281-004 -3.175-002	4.946-003 -5.883-001
0.50	-2.474-002 -1.133+000	-1.200-003 -5.453-002	-1.553-002 -6.801-001	1.579-002 -6.190-001	7.822-004 -3.424-002	1.111-002 -7.095-001
0.60	-1.831-001 -1.523+000	-7.180-003 -7.402-002	-8.104-002 -7.547-001	4.435-002 -6.855-001	1.767-003 -3.342-002	2.172-002 -8.176-001
0.70	-1.795+000 -3.974+000	-4.978-002 -1.077-001	-3.543-001 -6.070-001	1.771-001 -7.177-001	4.956-003 -2.953-002	3.826-002 -9.242-001
0.80	-5.619+000 2.171+000	-7.886-002 3.445-002	6.167-001 4.469-002	1.798-001 -1.175+000	2.578-003 -2.977-002	-1.550-002 -9.999-001
0.90	-1.579+000 2.102+000	3.385-003 1.364-003	7.727-001 -6.113-001	-5.807-003 -1.099+000	5.815-005 -1.503-002	6.502-003 -1.018+000
1.00	-8.177-001 1.395+000	1.727-002 -2.126-002	7.829-001 -7.520-001	-2.163-002 -1.067+000	4.520-004 8.452-004	2.022-002 -1.041+000
1.10	-5.497-001 1.027+000	2.381-002 -3.348-002	8.446-001 -7.924-001	-2.491-002 -1.041+000	9.559-004 1.930-002	2.742-002 -1.045+000
1.20	-4.120-001 8.062-001	2.861-002 -4.153-002	9.314-001 -7.924-001	-2.689-002 -1.004+000	1.534-003 4.031-002	3.049-002 -1.026+000
1.30	-3.244-001 6.564-001	3.254-002 -4.737-002	1.030+000 -7.660-001	-2.868-002 -9.483-001	2.238-003 6.330-002	3.038-002 -9.837-001
1.40	-2.600-001 5.460-001	3.573-002 -5.176-002	1.133+000 -7.182-001	-2.985-002 -8.734-001	3.080-003 8.745-002	2.795-002 -9.177-001
1.50	-2.082-001 4.589-001	3.810-002 -5.500-002	1.235+000 -6.510-001	-2.963-002 -7.798-001	3.989-003 1.118-001	2.411-002 -8.294-001
1.60	-1.638-001 3.865-001	3.952-002 -5.724-002	1.332+000 -5.653-001	-2.739-002 -6.698-001	4.808-003 1.353-001	1.973-002 -7.211-001
1.70	-1.242-001 3.235-001	3.978-002 -5.853-002	1.419+000 -4.617-001	-2.294-002 -5.464-001	5.302-003 1.570-001	1.541-002 -5.956-001
1.80	-8.765-002 2.658-001	3.860-002 -5.887-002	1.495+000 -3.406-001	-1.666-002 -4.134-001	5.209-003 1.759-001	1.140-002 -4.562-001
1.90	-5.406-002 2.100-001	3.558-002 -5.807-002	1.556+000 -2.019-001	-9.595-003 -2.744-001	4.300-003 1.913-001	7.591-003 -3.066-001
2.00	-2.424-002 1.526-001	3.022-002 -5.571-002	1.601+000 -4.522-002	-3.340-003 -1.331-001	2.470-003 2.027-001	3.746-003 -1.504-001
2.10	-1.866-003 8.999-002	2.206-002 -5.077-002	1.629+000 1.302-001	8.028-005 7.855-003	-1.626-004 2.097-001	-2.227-004 8.955-003
2.20	5.376-003 2.110-002	1.129-002 -4.144-002	1.644+000 3.247-001	-1.305-003 1.469-001	-3.122-003 2.121-001	-4.043-003 1.678-001
2.30	-1.343-002 -4.782-002	-3.816-005 -2.549-002	1.652+000 5.352-001	-8.093-003 2.845-001	-5.536-003 2.093-001	-7.377-003 3.219-001
2.40	-6.329-002 -9.832-002	-7.357-003 -2.650-003	1.658+000 7.511-001	-1.742-002 4.214-001	-6.550-003 2.002-001	-1.099-002 4.664-001
2.50	-1.297-001 -1.100-001	-6.545-003 2.271-002	1.660+000 9.562-001	-2.337-002 5.547-001	-6.261-003 1.832-001	-1.740-002 5.978-001
2.60	-1.859-001 -8.262-002	1.276-003 4.420-002	1.644+000 1.141+000	-2.225-002 6.770-001	-5.805-003 1.579-001	-2.848-002 7.157-001
2.70	-2.174-001 -3.445-002	1.115-002 5.924-002	1.597+000 1.310+000	-1.542-002 7.808-001	-6.088-003 1.250-001	-4.306-002 8.209-001
2.80	-2.273-001 1.784-002	1.927-002 6.918-002	1.519+000 1.469+000	-5.921-003 8.623-001	-7.195-003 8.561-002	-5.813-002 9.122-001
2.90	-2.240-001 6.733-002	2.436-002 7.623-002	1.411+000 1.620+000	4.225-003 9.199-001	-8.855-003 4.079-002	-7.090-002 9.871-001
3.00	-2.144-001 1.134-001	2.649-002 8.197-002	1.278+000 1.763+000	1.401-002 9.527-001	-1.086-002 -8.486-003	-7.952-002 1.043+000
3.10	-2.028-001 1.578-001	2.613-002 8.725-002	1.123+000 1.897+000	2.267-002 9.600-001	-1.315-002 -6.109-002	-8.313-002 1.076+000
3.20	-1.914-001 2.030-001	2.379-002 9.247-002	9.483-001 2.017+000	2.920-002 9.414-001	-1.572-002 -1.156-001	-8.175-002 1.084+000
3.30	-1.816-001 2.517-001	1.989-002 9.784-002	7.567-001 2.121+000	3.236-002 8.973-001	-1.850-002 -1.705-001	-7.613-002 1.066+000
3.40	-1.743-001 3.073-001	1.480-002 1.035-001	5.503-001 2.208+000	3.084-002 8.294-001	-2.134-002 -2.240-001	-6.754-002 1.022+000
3.50	-1.705-001 3.744-001	8.880-003 1.094-001	3.313-001 2.274+000	2.363-002 7.402-001	-2.391-002 -2.742-001	-5.745-002 9.514-001
3.60	-1.709-001 4.602-001	2.456-003 1.157-001	1.022-001 2.318+000	1.023-002 6.332-001	-2.581-002 -3.195-001	-4.717-002 8.572-001
3.70	-1.769-001 5.781-001	-4.090-003 1.226-001	-1.343-001 2.339+000	-9.232-003 5.123-001	-2.656-002 -3.583-001	-3.762-002 7.422-001
3.80	-1.903-001 7.570-001	-1.026-002 1.305-001	-3.750-001 2.335+000	-3.436-002 3.814-001	-2.577-002 -3.893-001	-2.916-002 6.099-001
3.90	-2.110-001 1.074+000	-1.511-002 1.404-001	-6.167-001 2.304+000	-6.577-002 2.436-001	-2.315-002 -4.115-001	-2.159-002 4.642-001
4.00	-2.029-001 1.832+000	-1.526-002 1.565-001	-8.557-001 2.241+000	-1.118-001 1.000-001	-1.867-002 -4.241-001	-1.423-002 3.090-001
4.50	7.573-002 -1.998-001	-3.075-002 1.519-001	-1.938+000 1.564+000	-1.827-002 -4.457-001	4.182-002 -3.349-001	3.234-002 -5.028-001
5.00	7.581-001 -3.743-001	-6.756-002 -2.536-002	-2.779+000 4.080-001	-1.439-001 -1.279+000	2.089-002 -4.259-003	9.816-002 -1.017+000

Table A28a
Impedance Coefficients
$T = 0.2 \quad H = 3.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	5.670-005	1.686-002	1.250-006	1.662-004	8.509-005	6.703-003	2.062-005	9.772-004	1.389-004	6.046-003	1.684-005	1.595-003
0.05	1.422-003	8.457-002	3.115-005	8.295-004	2.120-003	3.339-002	5.140-004	4.855-003	3.472-003	3.010-002	4.209-004	7.977-003
0.10	5.738-003	1.708-001	1.235-004	1.651-003	8.397-003	6.601-002	2.037-003	9.515-003	1.388-002	5.940-002	1.684-003	1.598-002
0.15	1.312-002	2.604-001	2.741-004	2.455-003	1.858-002	9.714-002	4.514-003	1.380-002	3.123-002	8.711-002	3.793-003	2.406-002
0.20	2.390-002	3.556-001	4.785-004	3.238-003	3.230-002	1.261-001	7.860-003	1.754-002	5.555-002	1.125-001	6.764-003	3.228-002
0.30	5.853-002	5.747-001	1.029-003	4.727-003	6.827-002	1.756-001	1.675-002	2.288-002	1.262-001	1.537-001	1.552-002	4.976-002
0.40	1.220-001	8.659-001	1.755-003	6.131-003	1.118-001	2.114-001	2.789-002	2.468-002	2.321-001	1.769-001	2.926-002	7.060-002
0.50	2.562-001	1.316+000	2.724-003	7.527-003	1.578-001	2.311-001	4.099-002	2.211-002	3.952-001	1.699-001	5.281-002	1.001-001
0.60	6.514-001	2.178+000	4.371-003	9.069-003	1.994-001	2.294-001	5.728-002	1.243-002	6.906-001	7.976-002	1.066-001	1.520-001
0.70	2.991+000	4.211+000	9.453-003	1.003-002	1.978-001	1.868-001	7.890-002	-2.572-002	1.372+000	-5.878-001	3.359-001	2.376-001
0.80	6.068+000	-4.741+000	4.316-003	-2.879-003	1.495-001	3.833-001	-2.929-002	-3.566-002	-1.249+000	-1.663+000	3.221-001	-5.136-001
0.90	9.654-001	-2.986+000	1.068-004	5.336-003	3.082-001	3.507-001	1.124-002	9.712-003	-7.754-001	-1.077-001	-1.129-002	-2.479-001
1.00	3.581-001	-1.861+000	6.774-004	8.391-003	3.587-001	3.164-001	2.686-002	5.675-003	-4.235-001	7.623-002	-2.857-002	-1.501-001
1.10	1.975-001	-1.342+000	1.270-003	1.038-002	3.927-001	2.910-001	3.202-002	-9.613-004	-2.527-001	1.110-001	-2.991-002	-1.086-001
1.20	1.330-001	-1.048+000	1.923-003	1.209-002	4.187-001	2.679-001	3.261-002	-6.965-003	-1.537-001	1.098-001	-3.064-002	-8.510-002
1.30	9.902-002	-8.573-001	2.740-003	1.366-002	4.384-001	2.455-001	3.069-002	-1.157-002	-9.161-002	9.623-002	-3.188-002	-6.871-002
1.40	7.682-002	-7.212-001	3.776-003	1.507-002	4.527-001	2.240-001	2.748-002	-1.450-002	-5.211-002	7.841-002	-3.318-002	-5.531-002
1.50	5.973-002	-6.170-001	5.029-003	1.624-002	4.621-001	2.040-001	2.386-002	-1.576-002	-2.774-002	6.037-002	-3.388-002	-4.322-002
1.60	4.524-002	-5.322-001	6.450-003	1.718-002	4.673-001	1.861-001	2.053-002	-1.564-002	-1.356-002	4.440-002	-3.338-002	-3.183-002
1.70	3.254-002	-4.596-001	7.943-003	1.753-002	4.694-001	1.707-001	1.790-002	-1.456-002	-5.971-003	3.153-002	-3.130-002	-2.112-002
1.80	2.148-002	-3.950-001	9.387-003	1.754-002	4.691-001	1.583-001	1.610-002	-1.304-002	-2.187-003	2.190-002	-2.741-002	-1.131-002
1.90	1.219-002	-3.354-001	1.064-002	1.708-002	4.674-001	1.487-001	1.501-002	-1.149-002	-1.350-004	1.491-002	-2.160-002	-2.790-003
2.00	5.051-003	-2.790-001	1.151-002	1.619-002	4.651-001	1.420-001	1.429-002	-1.014-002	1.417-003	9.468-003	-1.384-002	3.876-003
2.10	8.276-004	-2.244-001	1.176-002	1.493-002	4.629-001	1.380-001	1.353-002	-8.900-003	2.726-003	4.231-003	-4.287-003	7.808-003
2.20	9.241-004	-1.709-001	1.110-002	1.360-002	4.614-001	1.363-001	1.252-002	-7.222-003	2.803-003	-1.805-003	6.288-003	7.698-003
2.30	7.004-003	-1.199-001	9.354-003	1.271-002	4.616-001	1.365-001	1.180-002	-4.334-003	-2.823-004	-8.087-003	1.567-002	2.412-003
2.40	1.893-002	-7.445-002	6.910-003	1.312-002	4.642-001	1.373-001	1.284-002	-2.982-004	-7.337-003	-1.160-002	2.031-002	-7.126-003
2.50	3.283-002	-3.712-002	4.788-003	1.484-002	4.685-001	1.374-001	1.664-002	3.203-003	-1.541-002	-9.266-003	1.835-002	-1.668-002
2.60	4.399-002	-6.022-003	3.702-003	1.740-002	4.734-001	1.362-001	2.216-002	4.165-003	-1.995-002	-2.079-003	1.195-002	-2.245-002
2.70	5.094-002	2.294-002	3.567-003	1.996-002	4.782-001	1.341-001	2.745-002	2.294-003	-1.929-002	6.182-003	4.593-003	-2.387-002
2.80	5.470-002	5.263-002	3.981-003	2.224-002	4.828-001	1.317-001	3.128-002	-1.523-003	-1.464-002	1.263-002	-1.932-003	-2.230-002
2.90	5.654-002	8.435-002	4.675-003	2.426-002	4.876-001	1.290-001	3.326-002	-6.263-003	-7.880-003	1.614-002	-7.295-003	-1.892-002
3.00	5.724-002	1.188-001	5.557-003	2.611-002	4.923-001	1.257-001	3.346-002	-1.113-002	-5.949-004	1.664-002	-1.160-002	-1.426-002
3.10	5.722-002	1.568-001	6.624-003	2.783-002	4.969-001	1.217-001	3.215-002	-1.552-002	6.083-003	1.455-002	-1.491-002	-8.469-003
3.20	5.674-002	1.994-001	7.886-003	2.941-002	5.011-001	1.170-001	2.969-002	-1.905-002	1.140-002	1.051-002	-1.708-002	-1.594-003
3.30	5.610-002	2.490-001	9.335-003	3.080-002	5.046-001	1.117-001	2.653-002	-2.145-002	1.497-002	5.309-003	-1.788-002	6.304-003
3.40	5.572-002	3.047-001	1.093-002	3.196-002	5.072-001	1.060-001	2.312-002	-2.267-002	1.676-002	-2.888-004	-1.702-002	1.508-002
3.50	5.613-002	3.722-001	1.261-002	3.287-002	5.087-001	1.002-001	1.991-002	-2.280-002	1.705-002	-5.649-003	-1.425-002	2.455-002
3.60	5.806-002	4.546-001	1.432-002	3.351-002	5.092-001	9.460-002	1.721-002	-2.208-002	1.635-002	-1.040-002	-9.341-003	3.456-002
3.70	6.256-002	5.586-001	1.598-002	3.394-002	5.087-001	8.949-002	1.521-002	-2.080-002	1.528-002	-1.448-002	-2.026-003	4.508-002
3.80	7.140-002	6.955-001	1.759-002	3.419-002	5.075-001	8.510-002	1.400-002	-1.928-002	1.449-002	-1.822-002	8.155-003	5.637-002
3.90	8.824-002	8.871-001	1.914-002	3.431-002	5.058-001	8.154-002	1.354-002	-1.784-002	1.457-002	-2.239-002	2.221-002	6.916-002
4.00	1.223-001	1.180+000	2.072-002	3.434-002	5.038-001	7.889-002	1.370-002	-1.677-002	1.621-002	-2.850-002	4.262-002	8.523-002
4.50	2.395-001	-2.744+000	2.223-002	3.345-002	4.976-001	7.685-002	1.844-002	-1.637-002	-2.626-002	5.854-002	-1.097-001	-1.036-001
5.00	2.129-001	-5.136-001	8.807-003	2.399-002	5.104-001	7.588-002	1.497-002	-6.912-003	-5.623-002	2.363-002	3.779-002	-1.294-001

Table A28b
Pressure Coefficients
$T = 0.2 \quad H = 3.0$

ka	p_1^0		p_2^0		p_3^0		p_1^{90}		p_2^{90}		p_3^{90}	
0.01	4.089-009	-1.350-002	6.057-010	-2.000-003	4.997-009	-1.650-002	3.970-009	-1.350-002	5.998-010	-2.000-003	4.851-009	-1.650-002
0.05	2.538-006	-6.770-002	3.749-007	-9.997-003	3.092-006	-8.234-002	2.528-006	-6.739-002	3.735-007	-9.962-003	3.080-006	-8.239-002
0.10	3.973-005	-1.367-001	5.817-006	-1.998-002	4.795-005	-1.638-001	4.035-005	-1.341-001	5.908-006	-1.970-002	4.869-005	-1.642-001
0.15	1.936-004	-2.083-001	2.793-005	-2.995-002	2.299-004	-2.434-001	2.035-004	-1.995-001	2.936-005	-2.898-002	2.416-004	-2.447-001
0.20	5.771-004	-2.843-001	8.154-005	-3.991-002	6.705-004	-3.204-001	6.408-004	-2.629-001	9.050-005	-3.760-002	7.429-004	-3.234-001
0.30	2.369-003	-4.594-001	3.146-004	-6.007-002	2.586-003	-4.640-001	3.246-003	-3.812-001	4.298-004	-5.205-002	3.492-003	-4.737-001
0.40	4.324-003	-6.945-001	5.275-004	-8.146-002	4.487-003	-5.903-001	1.058-002	-4.830-001	1.268-003	-6.160-002	1.006-002	-6.123-001
0.50	-5.952-003	-1.067+000	-5.569-004	-1.068-001	-2.268-003	-6.954-001	2.880-002	-5.596-001	2.971-003	-6.496-002	2.228-002	-7.380-001
0.60	-1.176-001	-1.816+000	-9.402-003	-1.440-001	-5.229-002	-7.668-001	8.005-002	-5.922-001	6.573-003	-6.095-002	4.283-002	-8.527-001
0.70	-1.456+000	-3.914+000	-8.137-002	-2.145-001	-2.993-001	-6.425-001	3.247-001	-5.539-001	1.837-002	-5.017-002	7.579-002	-9.795-001
0.80	-5.874+000	2.292+000	-1.567-001	6.892-002	6.925-001	2.704-002	3.772-001	-1.449+000	1.030-002	-6.485-002	-3.440-002	-1.067+000
0.90	-1.525+000	2.111+000	1.204-002	-4.638-003	8.024-001	-6.465-001	-1.799-002	-1.224+000	3.001-004	-2.443-002	1.641-002	-1.060+000
1.00	-7.859-001	1.382+000	3.809-002	-4.970-002	8.143-001	-7.619-001	-4.696-002	-1.135+000	2.162-003	1.264-002	4.319-002	-1.089+000
1.10	-5.279-001	1.017+000	5.068-002	-7.398-002	8.852-001	-7.827-001	-5.367-002	-1.086+000	4.455-003	5.384-002	5.623-002	-1.100+000
1.20	-3.942-001	8.005-001	5.988-002	-9.023-002	9.820-001	-7.649-001	-5.845-002	-1.035+000	7.191-003	9.975-002	6.075-002	-1.086+000
1.30	-3.078-001	6.536-001	6.713-002	-1.022-001	1.090+000	-7.212-001	-6.275-002	-9.681-001	1.059-002	1.490-001	5.883-002	-1.046+000
1.40	-2.437-001	5.443-001	7.259-002	-1.112-001	1.201+000	-6.563-001	-6.526-002	-8.833-001	1.460-002	1.996-001	5.245-002	-9.792-001
1.50	-1.923-001	4.570-001	7.611-002	-1.176-001	1.308+000	-5.718-001	-6.624-002	-7.805-001	1.878-002	2.491-001	4.375-002	-8.869-001
1.60	-1.486-001	3.833-001	7.749-002	-1.216-001	1.407+000	-4.690-001	-6.853-002	-6.626-001	2.231-002	2.950-001	3.465-002	-7.715-001
1.70	-1.102-001	3.182-001	7.641-002	-1.233-001	1.493+000	-3.479-001	-4.807-002	-5.337-001	2.410-002	3.354-001	2.635-002	-6.367-001
1.80	-7.556-002	2.579-001	7.238-002	-1.227-001	1.564+000	-2.089-001	-3.409-002	-3.984-001	2.311-002	3.686-001	1.914-002	-4.871-001
1.90	-4.415-002	1.988-001	6.461-002	-1.193-001	1.617+000	-5.186-002	-1.903-002	-2.611-001	1.859-002	3.938-001	1.263-002	-3.269-001
2.00	-1.718-002	1.370-001	5.208-002	-1.122-001	1.651+000	1.233-001	-6.281-003	-1.253-001	1.039-002	4.106-001	6.193-003	-1.602-001
2.10	9.659-004	6.871-002	3.396-002	-9.911-002	1.667+000	3.168-001	1.205-004	7.354-003	-6.643-004	4.191-001	-3.651-004	9.521-003
2.20	8.385-004	-6.931-003	1.119-002	-7.574-002	1.669+000	5.275-001	-3.524-003	1.380-001	-1.232-002	4.194-001	-6.604-003	1.780-001
2.30	-3.012-002	-8.061-002	-1.055-002	-3.765-002	1.664+000	7.492-001	-1.751-002	2.714-001	-2.090-002	4.099-001	-1.248-002	3.395-001
2.40	-9.432-002	-1.289-001	-2.047-002	1.362-002	1.654+000	9.674-001	-3.422-002	4.121-001	-2.348-002	3.859-001	-2.083-002	4.884-001
2.50	-1.696-001	-1.316-001	-1.203-002	6.557-002	1.631+000	1.166+000	-4.092-002	5.553-001	-2.189-002	3.424-001	-3.690-002	6.230-001
2.60	-2.261-001	-9.587-002	8.524-003	1.059-001	1.579+000	1.343+000	-3.214-002	6.867-001	-2.118-002	2.779-001	-6.221-002	7.469-001
2.70	-2.540-001	-4.472-002	2.987-002	1.323-001	1.491+000	1.505+000	-1.249-002	7.950-001	-2.430-002	1.961-001	-9.220-002	8.628-001
2.80	-2.600-001	5.918-003	4.572-002	1.495-001	1.370+000	1.658+000	1.176-002	8.757-001	-3.109-002	1.009-001	-1.205-001	9.689-001
2.90	-2.538-001	5.101-002	5.485-002	1.621-001	1.220+000	1.802+000	3.680-002	9.278-001	-4.057-002	-4.889-003	-1.421-001	1.061+000
3.00	-2.419-001	9.086-002	5.806-002	1.728-001	1.047+000	1.935+000	6.034-002	9.506-001	-5.215-002	-1.185-001	-1.540-001	1.134+000
3.10	-2.278-001	1.273-001	5.651-002	1.828-001	8.535-001	2.054+000	8.012-002	9.436-001	-6.558-002	-2.369-001	-1.553-001	1.181+000
3.20	-2.136-001	1.623-001	5.121-002	1.927-001	6.429-001	2.155+000	9.348-002	9.075-001	-8.044-002	-3.560-001	-1.467-001	1.200+000
3.30	-2.001-001	1.976-001	4.296-002	2.027-001	4.178-001	2.236+000	9.774-002	8.445-001	-9.581-002	-4.715-001	-1.307-001	1.186+000
3.40	-1.879-001	2.350-001	3.244-002	2.128-001	1.808-001	2.293+000	9.092-002	7.589-001	-1.101-001	-5.790-001	-1.107-001	1.139+000
3.50	-1.776-001	2.764-001	2.025-002	2.231-001	-6.499-002	2.326+000	7.260-002	6.561-001	-1.214-001	-6.746-001	-8.991-002	1.060+000
3.60	-1.696-001	3.243-001	6.954-003	2.335-001	-3.166-001	2.332+000	4.425-002	5.427-001	-1.274-001	-7.553-001	-7.102-002	9.527-001
3.70	-1.643-001	3.823-001	-6.884-003	2.439-001	-5.709-001	2.311+000	9.261-003	4.249-001	-1.266-001	-8.188-001	-5.528-002	8.220-001
3.80	-1.628-001	4.563-001	-2.065-002	2.545-001	-8.243-001	2.260+000	-2.739-002	3.084-001	-1.178-001	-8.633-001	-4.271-002	6.729-001
3.90	-1.665-001	5.578-001	-3.364-002	2.654-001	-1.073+000	2.181+000	-5.929-002	1.985-001	-1.003-001	-8.877-001	-3.227-002	5.103-001
4.00	-1.775-001	7.110-001	-4.482-002	2.771-001	-1.314+000	2.071+000	-7.785-002	1.012-001	-7.409-002	-8.909-001	-2.237-002	3.384-001
4.50	3.733-001	-1.097+000	-1.094-001	2.481-001	-2.315+000	1.120+000	-3.644-001	-7.318-001	1.441-001	-5.869-001	5.783-002	-5.510-001
5.00	9.374-001	2.020-001	3.637-002	-4.963-002	-2.894+000	-3.133-001	2.519-001	-1.829+000	1.322-001	1.347-002	1.113-001	-1.085+000

Table A29a
Impedance Coefficients
$T = 0.3 \quad H = 3.0$

k_a	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	4.882-005	1.605-002	2.721-006	3.379-004	9.028-005	6.947-003	3.136-005	1.429-003	1.328-004	5.523-003	2.306-005	2.183-003
0.05	1.224-003	8.048-002	6.784-005	1.646-003	2.249-003	3.459-002	7.812-004	7.092-003	3.318-003	2.748-002	5.762-004	1.092-002
0.10	4.935-003	1.625-001	2.686-004	3.352-003	8.892-003	6.833-002	3.091-003	1.387-002	1.325-002	5.412-002	2.303-003	2.187-002
0.15	1.127-002	2.480-001	5.944-004	4.980-003	1.963-002	1.004-001	6.832-003	2.005-002	2.974-002	7.910-002	5.176-003	3.292-002
0.20	2.049-002	3.388-001	1.034-003	6.557-003	3.401-002	1.302-001	1.186-002	2.537-002	5.278-002	1.017-001	9.204-003	4.416-002
0.30	4.995-002	5.487-001	2.202-003	9.537-003	7.131-002	1.806-001	2.503-002	3.265-002	1.191-001	1.369-001	2.097-002	6.813-002
0.40	1.038-001	8.297-001	3.709-003	1.233-002	1.156-001	2.167-001	4.121-002	3.455-002	2.175-001	1.540-001	3.923-002	9.702-002
0.50	2.183-001	1.269+000	5.679-003	1.514-002	1.616-001	2.370-001	5.974-002	3.005-002	3.677-001	1.416-001	7.037-002	1.388-001
0.60	5.628-001	2.129+000	8.991-003	1.836-002	2.021-001	2.376-001	8.220-002	1.554-002	6.402-001	4.968-002	1.421-001	2.155-001
0.70	2.774+000	4.373+000	1.975-002	2.112-002	2.004-001	2.024-001	1.126-001	-3.890-002	1.296+000	-5.967-001	4.675-001	3.674-001
0.80	5.883+000	-5.194+000	7.911-003	-7.636-003	1.892-001	4.032-001	-4.578-002	-3.877-002	-1.441+000	-1.422+000	4.285-001	-7.875-001
0.90	8.659-001	-2.920+000	3.818-004	1.066-002	3.284-001	3.465-001	2.233-002	1.372-002	-7.274-001	-1.156-002	-2.622-002	-3.513-001
1.00	3.293-001	-1.811+000	1.818-003	1.690-002	3.724-001	3.135-001	4.269-002	4.378-003	-3.837-001	1.174-001	-4.533-002	-2.139-001
1.10	1.866-001	-1.311+000	3.264-003	2.102-002	4.043-001	2.897-001	4.830-002	-6.612-003	-2.223-001	1.329-001	-4.689-002	-1.558-001
1.20	1.291-001	-1.029+000	4.927-003	2.454-002	4.298-001	2.675-001	4.748-002	-1.593-002	-1.297-001	1.224-001	-4.839-002	-1.225-001
1.30	9.633-002	-8.464-001	7.027-003	2.770-002	4.497-001	2.455-001	4.315-002	-2.267-002	-7.238-002	1.032-001	-5.057-002	-9.867-002
1.40	7.473-002	-7.165-001	9.636-003	3.037-002	4.642-001	2.239-001	3.716-002	-2.651-002	-3.680-002	8.160-002	-5.244-002	-7.874-002
1.50	5.764-002	-6.170-001	1.268-002	3.236-002	4.736-001	2.036-001	3.095-002	-2.759-002	-1.584-002	6.115-002	-5.295-002	-6.062-002
1.60	4.306-002	-5.360-001	1.596-002	3.352-002	4.788-001	1.852-001	2.557-002	-2.651-002	-4.666-003	4.378-002	-5.130-002	-4.377-002
1.70	3.040-002	-4.666-001	1.921-002	3.376-002	4.805-001	1.696-001	2.159-002	-2.411-002	4.029-004	3.025-002	-4.711-002	-2.833-002
1.80	1.959-002	-4.050-001	2.215-002	3.305-002	4.799-001	1.569-001	1.907-002	-2.122-002	2.219-003	2.041-002	-4.026-002	-1.469-002
1.90	1.073-002	-3.484-001	2.448-002	3.143-002	4.779-001	1.474-001	1.767-002	-1.848-002	2.735-003	1.341-002	-3.079-002	-3.376-003
2.00	4.110-003	-2.951-001	2.583-002	2.905-002	4.753-001	1.407-001	1.679-002	-1.612-002	2.985-003	7.946-003	-1.880-002	4.886-003
2.10	4.539-004	-2.437-001	2.575-002	2.616-002	4.729-001	1.368-001	1.587-002	-1.384-002	2.926-003	2.682-003	-4.555-003	8.864-003
2.20	1.211-003	-1.938-001	2.365-002	2.324-002	4.716-001	1.352-001	1.486-002	-1.071-002	1.329-003	-3.110-003	1.068-002	6.740-003
2.30	8.105-003	-1.467-001	1.932-002	2.177-002	4.721-001	1.352-001	1.488-002	-5.901-003	-3.628-003	-8.321-003	2.340-002	-3.064-003
2.40	2.083-002	-1.060-001	1.386-002	2.329-002	4.746-001	1.354-001	1.811-002	-1.179-004	-1.194-002	-9.594-003	2.829-002	-1.860-002
2.50	3.513-002	-7.411-002	9.573-003	2.776-002	4.782-001	1.347-001	2.522-002	3.628-003	-1.973-002	-4.590-003	2.317-002	-3.317-002
2.60	4.622-002	-4.894-002	7.806-003	3.387-002	4.821-001	1.332-001	3.388-002	2.900-003	-2.264-002	4.500-003	1.180-002	-4.150-002
2.70	5.277-002	-2.642-002	8.182-003	3.947-002	4.858-001	1.316-001	4.112-002	-1.912-003	-1.992-002	1.348-002	-4.715-004	-4.299-002
2.80	5.579-002	-3.822-003	9.813-003	4.448-002	4.897-001	1.301-001	4.548-002	-9.160-003	-1.337-002	1.969-002	-1.131-002	-3.994-002
2.90	5.652-002	2.000-002	1.217-002	4.880-002	4.942-001	1.284-001	4.669-002	-1.719-002	-5.173-003	2.230-002	-2.016-002	-3.398-002
3.00	5.570-002	4.564-002	1.504-002	5.254-002	4.991-001	1.260-001	4.507-002	-2.478-002	2.959-003	2.147-002	-2.701-002	-2.594-002
3.10	5.378-002	7.363-002	1.836-002	5.571-002	5.042-001	1.228-001	4.119-002	-3.103-002	9.780-003	1.789-002	-3.178-002	-1.625-002
3.20	5.113-002	1.046-001	2.203-002	5.824-002	5.090-001	1.185-001	3.588-002	-3.538-002	1.452-002	1.251-002	-3.420-002	-5.287-003
3.30	4.814-002	1.394-001	2.590-002	6.007-002	5.131-001	1.132-001	2.998-002	-3.762-002	1.692-002	6.409-003	-3.402-002	6.452-003
3.40	4.521-002	1.787-001	2.976-002	6.119-002	5.161-001	1.074-001	2.432-002	-3.790-002	1.719-002	5.433-004	-3.114-002	1.838-002
3.50	4.274-002	2.235-001	3.341-002	6.169-002	5.178-001	1.013-001	1.952-002	-3.662-002	1.587-002	-4.421-003	-2.563-002	2.996-002
3.60	4.103-002	2.753-001	3.674-002	6.172-002	5.183-001	9.554-002	1.591-002	-3.434-002	1.367-002	-8.176-003	-1.770-002	4.078-002
3.70	4.031-002	3.359-001	3.967-002	6.144-002	5.178-001	9.031-002	1.361-002	-3.161-002	1.125-002	-1.079-002	-7.552-003	5.062-002
3.80	4.083-002	4.087-001	4.225-002	6.108-002	5.165-001	8.588-002	1.252-002	-2.892-002	9.118-003	-1.262-002	4.670-003	5.948-002
3.90	4.303-002	4.986-001	4.452-002	6.062-002	5.146-001	8.236-002	1.249-002	-2.658-002	7.584-003	-1.416-002	1.906-002	6.756-002
4.00	4.781-002	6.144-001	4.664-002	6.027-002	5.125-001	7.980-002	1.323-002	-2.494-002	6.668-003	-1.610-002	3.612-002	7.527-002
4.50	9.411-001	4.312+000	6.356-002	5.284-002	5.061-001	7.973-002	1.303-002	-3.050-002	-3.181-002	-1.093-001	4.414-001	1.683-001
5.00	2.716-002	-8.946-001	5.949-002	4.315-002	5.177-001	8.088-002	2.533-003	-2.891-002	-9.364-004	9.911-004	1.100-002	-2.420-002

Table A29b
Pressure Coefficients
$T = 0.3 \quad H = 3.0$

kd	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	5.816-009 -1.275-002	1.368-009 -3.000-003	7.868-009 -1.72 -002	5.653-009 -1.275-002	1.348-009 -2.999-003	7.648-009 -1.725-002
0.05	3.618-006 -6.394-002	8.486-007 -1.499-002	4.879-006 -8.606-002	3.575-006 -6.362-002	8.387-007 -1.494-002	4.822-006 -8.613-002
0.10	5.699-005 -1.290-001	1.325-005 -2.995-002	7.611-005 -1.710-001	5.698-005 -1.265-001	1.325-005 -2.950-002	7.609-005 -1.715-001
0.15	2.810-004 -1.966-001	6.433-005 -4.483-002	3.692-004 -2.538-001	2.868-004 -1.878-001	6.564-005 -4.332-002	3.766-004 -2.555-001
0.20	8.549-004 -2.682-001	1.914-004 -5.967-002	1.097-003 -3.335-001	9.007-004 -2.469-001	2.016-004 -5.604-002	1.154-003 -3.374-001
0.30	3.820-003 -4.334-001	8.015-004 -8.947-002	4.582-003 -4.803-001	4.530-003 -3.552-001	9.483-004 -7.693-002	5.377-003 -4.932-001
0.40	9.364-003 -6.558-001	1.783-003 -1.208-001	1.027-002 -6.067-001	1.466-002 -4.441-001	2.764-003 -8.985-002	1.531-002 -6.366-001
0.50	9.343-003 -1.011+000	1.612-003 -1.576-001	1.087-002 -7.086-001	3.964-002 -5.021-001	6.387-003 -9.273-002	3.345-002 -7.673-001
0.60	-6.769-002 -1.739+000	-8.092-003 -2.118-001	-2.537-002 -7.738-001	1.102-001 -5.004-001	1.395-002 -8.342-002	6.332-002 -8.893-001
0.70	-1.263+000 -3.943+000	-1.053-001 -3.234-001	-2.502-001 -6.487-001	4.670-001 -3.742-001	3.958-002 -6.216-002	1.113-001 -1.037+000
0.80	-5.766+000 2.706+000	-2.097-001 1.105-001	8.174-001 -6.936-002	5.184-001 -1.757+000	1.946-002 -1.058-001	-5.547-002 -1.118+000
0.90	-1.403+000 2.083+000	2.749-002 -2.107-002	8.220-001 -6.967-001	-4.056-002 -1.335+000	1.107-003 -2.824-002	3.317-002 -1.103+000
1.00	-7.304-001 1.353+000	6.235-002 -8.644-002	8.399-001 -7.755-001	-7.627-002 -1.198+000	5.986-003 3.440-002	7.061-002 -1.141+000
1.10	-4.926-001 9.999-001	8.009-002 -1.221-001	9.219-001 -7.729-001	-8.627-002 -1.128+000	1.181-002 1.022-001	8.735-002 -1.160+000
1.20	-3.665-001 7.907-001	9.298-002 -1.466-001	1.029+000 -7.352-001	-9.467-002 -1.063+000	1.900-002 1.764-001	9.113-002 -1.152+000
1.30	-2.833-001 6.481-001	1.026-001 -1.647-001	1.147+000 -6.729-001	-1.021-001 -9.851-001	2.800-002 2.547-001	8.521-002 -1.115+000
1.40	-2.211-001 5.405-001	1.090-001 -1.782-001	1.265+000 -5.899-001	-1.058-001 -8.897-001	3.843-002 3.331-001	7.306-002 -1.047+000
1.50	-1.714-001 4.532-001	1.122-001 -1.872-001	1.377+000 -4.879-001	-1.030-001 -7.772-001	4.883-002 4.073-001	5.841-002 -9.496-001
1.60	-1.299-001 3.785-001	1.120-001 -1.920-001	1.476+000 -3.676-001	-9.234-002 -6.515-001	5.692-002 4.735-001	4.439-002 -8.256-001
1.70	-9.424-002 3.117-001	1.083-001 -1.926-001	1.560+000 -2.292-001	-7.429-002 -5.178-001	6.011-002 5.289-001	3.266-002 -6.803-001
1.80	-6.270-002 2.495-001	1.003-001 -1.890-001	1.624+000 -7.264-002	-5.145-002 -3.816-001	5.624-002 5.721-001	2.329-002 -5.194-001
1.90	-3.464-002 1.883-001	8.704-002 -1.808-001	1.666+000 1.019-001	-2.790-002 -2.473-001	4.412-002 6.026-001	1.526-002 -3.479-001
2.00	-1.125-002 1.240-001	6.693-002 -1.665-001	1.687+000 2.941-001	-8.784-003 -1.177-001	2.406-002 6.211-001	7.477-003 -1.702-001
2.10	2.594-003 5.239-002	3.891-002 -1.422-001	1.687+000 5.033-001	1.326-004 6.894-003	-1.500-003 6.285-001	-4.408-004 1.009-002
2.20	-3.476-003 -2.677-002	5.179-003 -1.015-001	1.672+000 7.266-001	-6.119-003 1.305-001	-2.708-002 6.251-001	-8.084-003 1.880-001
2.30	-4.255-002 -1.025-001	-2.457-002 -3.841-002	1.648+000 9.550-001	-2.684-002 2.625-001	-4.451-002 6.073-001	-1.632-002 3.567-001
2.40	-1.151-001 -1.491-001	-3.362-002 4.259-002	1.616+000 1.172+000	-4.899-002 4.105-001	-4.856-002 5.640-001	-3.058-002 5.105-001
2.50	-1.955-001 -1.475-001	-1.475-002 1.206-001	1.561+000 1.364+000	-5.301-002 5.669-001	-4.514-002 4.845-001	-5.805-002 6.508-001
2.60	-2.534-001 -1.080-001	2.037-002 1.790-001	1.471+000 1.532+000	-3.204-002 7.103-001	-4.606-002 3.664-001	-9.826-002 7.853-001
2.70	-2.809-001 -5.531-002	5.374-002 2.159-001	1.342+000 1.685+000	6.005-003 8.249-001	-5.748-002 2.208-001	-1.423-001 9.177-001
2.80	-2.861-001 -4.712-003	7.809-002 2.399-001	1.178+000 1.828+000	5.121-002 9.053-001	-7.903-002 5.360-002	-1.802-001 1.045+000
2.90	-2.786-001 3.925-002	9.210-002 2.575-001	9.877-001 1.959+000	9.693-002 9.500-001	-1.089-001 -1.283-001	-2.049-001 1.159+000
3.00	-2.648-001 7.696-002	9.725-002 2.723-001	7.751-001 2.075+000	1.382-001 9.590-001	-1.455-001 -3.187-001	-2.127-001 1.251+000
3.10	-2.481-001 1.100-001	9.527-002 2.859-001	5.448-001 2.172+000	1.699-001 9.331-001	-1.875-001 -5.108-001	-2.037-001 1.314+000
3.20	-2.304-001 1.401-001	8.759-002 2.992-001	3.004-001 2.247+000	1.873-001 8.756-001	-2.318-001 -6.967-001	-1.810-001 1.339+000
3.30	-2.125-001 1.684-001	7.532-002 3.123-001	4.530-002 2.296+000	1.867-001 7.924-001	-2.741-001 -8.688-001	-1.503-001 1.323+000
3.40	-1.952-001 1.963-001	5.940-002 3.253-001	-2.172-001 2.317+000	1.673-001 6.916-001	-3.091-001 -1.021+000	-1.178-001 1.267+000
3.50	-1.789-001 2.246-001	4.066-002 3.391-001	-4.837-001 2.308+000	1.313-001 5.817-001	-3.315-001 -1.150+000	-8.856-002 1.174+000
3.60	-1.637-001 2.546-001	1.991-002 3.508-001	-7.504-001 2.269+000	8.385-002 4.703-001	-3.373-001 -1.252+000	-6.550-002 1.050+000
3.70	-1.501-001 2.876-001	-2.061-003 3.632-001	-1.014+000 2.198+000	3.211-002 3.633-001	-3.242-001 -1.327+000	-4.910-002 9.017-001
3.80	-1.385-001 3.255-001	-2.442-002 3.752-001	-1.269+000 2.095+000	-1.598-002 2.647-001	-2.917-001 -1.373+000	-3.800-002 7.353-001
3.90	-1.295-001 3.710-001	-4.641-002 3.868-001	-1.514+000 1.960+000	-5.206-002 1.768-001	-2.405-001 -1.389+000	-2.980-002 5.561-001
4.00	-1.239-001 4.289-001	-6.697-002 3.979-001	-1.744+000 1.794+000	-6.744-002 1.013-001	-1.720-001 -1.375+000	-2.181-002 3.684-001
4.50	4.125-002 2.374+000	-4.671-002 4.676-001	-2.570+000 5.202-001	1.474+000 1.321-001	4.248-001 -8.524-001	3.725-002 -6.218-001
5.00	6.974-002 5.594-002	6.791-003 2.792-001	-2.718+000 -1.073+000	7.356-002 -9.879-001	9.208-001 1.478-001	1.194-002 -1.301+000

Table A30a
Impedance Coefficients
$T = 0.5 \quad H = 3.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	3.595-005	1.432-002	7.135-006	8.034-004	1.005-004	7.388-003	5.356-005	2.286-003	1.202-004	4.678-003	3.203-005	3.006-003
0.05	9.003-004	7.183-002	1.776-004	4.007-003	2.501-003	3.677-002	1.333-003	1.133-002	3.001-003	2.324-002	7.998-004	1.503-002
0.10	3.622-003	1.451-001	7.010-004	7.954-003	9.864-003	7.252-002	5.259-003	2.208-002	1.195-002	4.560-002	3.187-003	3.009-002
0.15	8.240-003	2.214-001	1.544-003	1.179-002	2.168-002	1.063-001	1.157-002	3.172-002	2.673-002	6.622-002	7.133-003	4.524-002
0.20	1.491-002	3.026-001	2.667-003	1.548-002	3.735-002	1.373-001	1.995-002	3.979-002	4.718-002	8.436-002	1.261-002	6.063-002
0.30	3.592-002	4.905-001	5.579-003	2.236-002	7.717-002	1.891-001	4.143-002	4.998-002	1.050-001	1.106-001	2.831-002	9.340-002
0.40	7.369-002	7.425-001	9.179-003	2.873-002	1.230-001	2.258-001	6.678-002	5.106-002	1.885-001	1.193-001	5.199-002	1.332-001
0.50	1.530-001	1.137+000	1.365-002	3.515-002	1.690-001	2.471-001	9.432-002	4.204-002	3.127-001	1.007-001	9.129-002	1.919-001
0.60	3.891-001	1.911+000	2.073-002	4.240-002	2.088-001	2.522-001	1.254-001	1.892-002	5.315-001	1.523-002	1.793-001	3.029-001
0.70	1.907+000	4.128+000	4.288-002	5.272-002	2.158-001	2.323-001	1.672-001	-5.272-002	1.072+000	-4.775-001	5.707-001	5.765-001
0.80	7.089+000	-5.553+000	2.520-002	-2.914-002	2.273-001	4.253-001	-8.542-002	-6.268-002	-1.666+000	-1.410+000	8.396-001	-1.383+000
0.90	8.306-001	-2.946+000	1.643-003	2.491-002	3.547-001	3.422-001	4.624-002	1.673-002	-6.821-001	1.033-001	-6.064-002	-5.606-001
1.00	3.128-001	-1.780+000	6.497-003	4.085-002	3.914-001	3.118-001	7.421-002	-5.759-003	-3.319-001	1.709-001	-8.506-002	-3.350-001
1.10	1.804-001	-1.284+000	1.146-002	5.117-002	4.219-001	2.906-001	7.805-002	-2.648-002	-1.784-001	1.616-001	-8.753-002	-2.428-001
1.20	1.252-001	-1.011+000	1.741-002	5.964-002	4.481-001	2.698-001	7.157-002	-4.233-002	-9.299-002	1.375-001	-9.085-002	-1.888-001
1.30	9.374-002	-8.364-001	2.477-002	6.648-002	4.692-001	2.478-001	5.988-002	-5.214-002	-4.214-002	1.094-001	-9.437-002	-1.488-001
1.40	7.135-002	-7.133-001	3.332-002	7.121-002	4.847-001	2.253-001	4.662-002	-5.569-002	-1.287-002	8.192-002	-9.580-002	-1.147-001
1.50	5.339-002	-6.190-001	4.237-002	7.342-002	4.945-001	2.035-001	3.464-002	-5.396-002	1.940-003	5.798-002	-9.349-002	-8.424-002
1.60	3.844-002	-5.422-001	5.105-002	7.308-002	4.993-001	1.839-001	2.565-002	-4.881-002	7.642-003	3.917-002	-8.688-002	-5.737-002
1.70	2.606-002	-4.768-001	5.859-002	7.047-002	5.003-001	1.672-001	2.008-002	-4.227-002	8.342-003	2.566-002	-7.623-002	-3.450-002
1.80	1.607-002	-4.191-001	6.441-002	6.601-002	4.988-001	1.540-001	1.737-002	-3.588-002	6.949-003	1.654-002	-6.216-002	-1.600-002
1.90	8.314-003	-3.670-001	6.806-002	6.008-002	4.960-001	1.442-001	1.646-002	-3.044-002	5.149-003	1.039-002	-4.519-002	-2.144-003
2.00	2.827-003	-3.187-001	6.898-002	5.330-002	4.929-001	1.375-001	1.624-002	-2.592-002	3.512-003	5.690-003	-2.558-002	6.459-003
2.10	1.366-004	-2.727-001	6.629-002	4.601-002	4.902-001	1.336-001	1.616-002	-2.139-002	1.557-003	1.226-003	-3.769-003	8.324-003
2.20	1.567-003	-2.285-001	5.905-002	4.006-002	4.888-001	1.317-001	1.662-002	-1.564-002	-2.100-003	-3.243-003	1.840-002	9.272-004
2.30	8.903-003	-1.872-001	4.717-002	3.862-002	4.890-001	1.310-001	1.981-002	-8.121-003	-8.855-003	-6.073-003	3.583-002	-1.788-002
2.40	2.236-002	-1.522-001	3.360-002	4.447-002	4.906-001	1.303-001	2.860-002	-1.053-003	-1.779-002	-3.952-003	4.059-002	-4.516-002
2.50	3.833-002	-1.266-001	2.381-002	5.877-002	4.927-001	1.291-001	4.247-002	3.836-004	-2.440-002	4.668-003	2.837-002	-7.138-002
2.60	5.151-002	-1.097-001	2.169-002	7.685-002	4.945-001	1.282-001	5.648-002	-6.767-003	-2.430-002	1.658-002	4.221-003	-8.650-002
2.70	5.918-002	-9.762-002	2.666-002	9.276-002	4.968-001	1.282-001	6.534-002	-2.037-002	-1.726-002	2.659-002	-2.241-002	-8.769-002
2.80	6.153-002	-8.671-002	3.636-002	1.060-001	5.003-001	1.287-001	6.680-002	-3.658-002	-6.220-003	3.148-002	-4.596-002	-7.826-002
2.90	5.981-002	-7.491-002	4.856-002	1.150-001	5.054-001	1.290-001	6.142-002	-5.133-002	5.327-003	3.060-002	-6.332-002	-6.163-002
3.00	5.537-002	-6.109-002	6.203-002	1.210-001	5.118-001	1.279-001	5.109-002	-6.234-002	1.465-002	2.507-002	-7.404-002	-4.119-002
3.10	4.950-002	-4.471-002	7.469-002	1.222-001	5.185-001	1.249-001	3.872-002	-6.787-002	2.026-002	1.692-002	-7.712-002	-1.945-002
3.20	4.328-002	-2.572-002	8.614-002	1.211-001	5.247-001	1.201-001	2.650-002	-6.872-002	2.196-002	8.303-003	-7.415-002	1.100-003
3.30	3.749-002	-4.398-003	9.567-002	1.181-001	5.295-001	1.140-001	1.618-002	-6.593-002	2.055-002	8.225-004	-6.630-002	1.897-002
3.40	3.251-002	1.891-002	1.032-001	1.142-001	5.327-001	1.072-001	8.519-003	-6.097-002	1.724-002	-4.688-003	-5.512-002	3.341-002
3.50	2.840-002	4.390-002	1.088-001	1.102-001	5.342-001	1.004-001	3.556-003	-5.515-002	1.318-002	-8.121-003	-4.194-002	4.433-002
3.60	2.501-002	7.050-002	1.131-001	1.065-001	5.344-001	9.416-002	9.357-004	-4.941-002	9.246-003	-9.815-003	-2.775-002	5.198-002
3.70	2.214-002	9.893-002	1.164-001	1.035-001	5.334-001	8.868-002	1.625-004	-4.434-002	5.931-003	-1.031-002	-1.316-002	5.674-002
3.80	1.957-002	1.296-001	1.191-001	1.013-001	5.317-001	8.416-002	7.362-004	-4.031-002	3.412-003	-1.018-002	1.423-003	5.896-002
3.90	1.719-002	1.633-001	1.217-001	9.967-002	5.295-001	8.067-002	2.218-003	-3.749-002	1.624-003	-9.903-003	1.578-002	5.901-002
4.00	1.502-002	2.010-001	1.246-001	9.902-002	5.271-001	7.827-002	4.089-003	-3.603-002	3.271-004	-9.817-003	2.975-002	5.694-002
4.50	1.714-002	5.131-001	1.497-001	9.103-002	5.203-001	7.916-002	3.320-003	-4.430-002	-9.096-003	-1.356-002	9.341-002	2.512-002
5.00	2.395-001	2.227+000	1.555-001	5.310-002	5.313-001	7.999-002	-1.427-002	-3.294-002	-5.168-002	-7.510-003	2.815-001	-8.039-002

Table A30b
Pressure Coefficients
$T = 0.5 \quad H = 3.0$

ω	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	8.475-009 -1.125-002	3.766-009 -5.000-003	1.412-008 -1.875-002	8.363-009 -1.125-002	3.746-009 -4.999-003	1.394-008 -1.875-002
0.05	5.277-006 -5.640-002	2.338-006 -2.498-002	8.766-006 -9.350-002	5.257-006 -5.610-002	2.329-006 -2.488-002	8.733-006 -9.359-002
0.10	8.343-005 -1.137-001	3.661-005 -4.982-002	1.372-004 -1.855-001	8.355-005 -1.113-001	3.667-005 -4.902-002	1.374-004 -1.862-001
0.15	4.142-004 -1.731-001	1.789-004 -7.444-002	6.699-004 -2.745-001	4.188-004 -1.647-001	1.808-004 -7.173-002	6.770-004 -2.770-001
0.20	1.274-003 -2.359-001	5.377-004 -9.880-002	2.012-003 -3.594-001	1.308-003 -2.154-001	5.516-004 -9.233-002	2.062-003 -3.653-001
0.30	5.975-003 -3.800-001	2.354-003 -1.471-001	8.786-003 -5.128-001	6.479-003 -3.050-001	2.548-003 -1.249-001	9.448-003 -5.324-001
0.40	1.678-002 -5.737-001	5.957-003 -1.968-001	2.222-002 -6.396-001	2.059-002 -3.711-001	7.256-003 -1.424-001	2.635-002 -6.858-001
0.50	3.238-002 -8.828-001	9.916-003 -2.537-001	3.779-002 -7.355-001	5.452-002 -3.975-001	1.628-002 -1.410-001	5.611-002 -8.273-001
0.60	1.651-002 -1.515+000	4.887-003 -3.351-001	3.123-002 -7.904-001	1.475-001 -3.401-001	3.410-002 -1.161-001	1.027-001 -9.641-001
0.70	-6.607-001 -3.530+000	-9.562-002 -5.119-001	-1.212-001 -6.981-001	6.056-001 -4.309-002	9.112-002 -6.212-002	1.765-001 -1.141+000
0.80	-6.717+000 2.761+000	-3.937-001 1.818-001	9.490-001 -6.254-002	1.084+000 -2.499+000	6.577-002 -2.210-001	-1.103-001 -1.245+000
0.90	-1.349+000 2.132+000	6.394-002 -6.305-002	8.752-001 -7.323-001	-9.607-002 -1.590+000	5.049-003 -2.200-002	7.180-002 -1.195+000
1.00	-6.805-001 1.355+000	1.175-001 -1.751-001	9.013-001 -7.591-001	-1.504-001 -1.331+000	2.268-002 1.073-001	1.297-001 -1.258+000
1.10	-4.487-001 1.001+000	1.440-001 -2.367-001	1.002+000 -7.141-001	-1.697-001 -1.212+000	4.398-002 2.399-001	1.494-001 -1.299+000
1.20	-3.237-001 7.936-001	1.611-001 -2.797-001	1.128+000 -6.370-001	-1.875-001 -1.115+000	7.120-002 3.803-001	1.456-001 -1.306+000
1.30	-2.402-001 6.505-001	1.706-001 -3.112-001	1.262+000 -5.377-001	-2.011-001 -1.010+000	1.047-001 5.216-001	1.253-001 -1.274+000
1.40	-1.788-001 5.396-001	1.735-001 -3.323-001	1.391+000 -4.199-001	-2.042-001 -8.887-001	1.409-001 6.546-001	9.707-002 -1.199+000
1.50	-1.321-001 4.476-001	1.706-001 -3.431-001	1.507+000 -2.849-001	-1.923-001 -7.545-001	1.731-001 7.711-001	6.909-002 -1.085+000
1.60	-9.593-002 3.681-001	1.632-001 -3.439-001	1.601+000 -1.326-001	-1.654-001 -6.141-001	1.931-001 8.664-001	4.690-002 -9.382-001
1.70	-6.701-002 2.974-001	1.517-001 -3.357-001	1.670+000 3.743-002	-1.272-001 -4.747-001	1.944-001 9.394-001	3.190-002 -7.685-001
1.80	-4.286-002 2.323-001	1.352-001 -3.193-001	1.711+000 2.251-001	-8.410-002 -3.415-001	1.734-001 9.914-001	2.225-002 -5.835-001
1.90	-2.216-002 1.690-001	1.119-001 -2.945-001	1.723+000 4.295-001	-4.337-002 -2.173-001	1.301-001 1.025+000	1.496-002 -3.891-001
2.00	-5.880-003 1.029-001	7.939-002 -2.590-001	1.707+000 6.488-001	-1.267-002 -1.026-001	6.814-002 1.043+000	7.645-003 -1.895-001
2.10	1.127-003 2.968-002	3.675-002 -2.068-001	1.667+000 8.798-001	1.159-004 6.049-003	-4.096-003 1.047+000	-4.753-004 1.119-002
2.20	-1.135-002 -5.105-002	-1.204-002 -1.286-001	1.606+000 1.116+000	-1.121-002 1.179-001	-7.173-002 1.038+000	-9.626-003 2.072-001
2.30	-5.617-002 -1.291-001	-5.169-002 -1.671-002	1.532+000 1.346+000	-4.378-002 2.501-001	-1.153-001 1.001+000	-2.330-002 3.904-001
2.40	-1.355-001 -1.803-001	-5.786-002 1.204-001	1.439+000 1.551+000	-7.504-002 4.174-001	-1.249-001 9.108-001	-5.174-002 5.569-001
2.50	-2.270-001 -1.830-001	-1.838-002 2.533-001	1.315+000 1.721+000	-6.973-002 6.095-001	-1.191-001 7.318-001	-1.043-001 7.161-001
2.60	-2.990-001 -1.424-001	4.984-002 3.529-001	1.147+000 1.860+000	-1.005-002 7.891-001	-1.358-001 4.627-001	-1.741-001 8.843-001
2.70	-3.376-001 -8.195-002	1.168-001 4.130-001	9.354-001 1.979+000	8.805-002 9.213-001	-1.987-001 1.391-001	-2.398-001 1.067+000
2.80	-3.472-001 -2.060-002	1.696-001 4.471-001	6.892-001 2.082+000	2.027-001 9.905-001	-3.106-001 -2.191-001	-2.802-001 1.252+000
2.90	-3.375-001 3.306-002	2.020-001 4.658-001	4.196-001 2.167+000	3.086-001 9.953-001	-4.609-001 -5.774-001	-2.846-001 1.420+000
3.00	-3.164-001 7.486-002	2.184-001 4.778-001	1.351-001 2.231+000	3.870-001 9.442-001	-6.367-001 -9.261-001	-2.540-001 1.548+000
3.10	-2.894-001 1.113-001	2.159-001 4.866-001	-1.574-001 2.266+000	4.254-001 8.524-001	-8.088-001 -1.227+000	-1.996-001 1.622+000
3.20	-2.602-001 1.378-001	2.018-001 4.958-001	-4.530-001 2.270+000	4.206-001 7.384-001	-9.611-001 -1.491+000	-1.369-001 1.634+000
3.30	-2.310-001 1.582-001	1.779-001 5.065-001	-7.474-001 2.238+000	3.778-001 6.193-001	-1.074+000 -1.714+000	-7.953-002 1.590+000
3.40	-2.031-001 1.744-001	1.469-001 5.190-001	-1.036+000 2.168+000	3.079-001 5.069-001	-1.137+000 -1.901+000	-3.590-002 1.497+000
3.50	-1.769-001 1.878-001	1.111-001 5.331-001	-1.316+000 2.061+000	2.234-001 4.078-001	-1.145+000 -2.056+000	-8.433-003 1.367+000
3.60	-1.524-001 1.994-001	7.233-002 5.482-001	-1.582+000 1.916+000	1.364-001 3.239-001	-1.101+000 -2.180+000	4.614-003 1.208+000
3.70	-1.298-001 2.100-001	3.216-002 5.640-001	-1.829+000 1.735+000	5.723-002 2.542-001	-1.008+000 -2.272+000	7.131-003 1.030+000
3.80	-1.089-001 2.201-001	-7.993-003 5.798-001	-2.054+000 1.519+000	-5.880-003 1.960-001	-8.723-001 -2.328+000	3.660-003 8.369-001
3.90	-8.985-002 2.300-001	-4.675-002 5.952-001	-2.251+000 1.272+000	-4.638-002 1.456-001	-6.971-001 -2.341+000	-1.509-003 6.328-001
4.00	-7.283-002 2.401-001	-8.224-002 6.105-001	-2.417+000 9.947-001	-5.942-002 9.842-002	-4.875-001 -2.308+000	-4.821-003 4.201-001
4.50	-3.473-002 3.265-001	-1.500-001 6.327-001	-2.703+000 -6.932-001	3.364-001 -2.558-001	1.061+000 -1.364+000	6.178-003 -7.193-001
5.00	-9.162-002 9.831-001	-5.499-002 3.890-001	-2.029+000 -2.305+000	2.337+000 -1.430+000	2.553+000 5.001-003	-1.242-001 -1.428+000

Table A31a
Impedance Coefficients
$T = 0.05 \quad H = 5.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	1.131-004	3.959-002	4.914-008	8.317-006	1.306-004	8.306-003	5.066-006	1.920-004	2.431-004	8.203-003	4.716-006	4.439-004
0.05	2.853-003	1.996-001	1.223-006	4.153-005	3.251-003	4.131-002	1.261-004	9.507-004	6.093-003	4.083-002	1.182-004	2.230-003
0.10	1.175-002	4.102-001	4.828-006	8.274-005	1.284-002	8.125-002	4.980-004	1.843-003	2.457-002	8.049-002	4.764-004	4.527-003
0.15	2.787-002	6.453-001	1.064-005	1.234-004	2.831-002	1.185-001	1.098-003	2.624-003	5.617-002	1.179-001	1.089-003	6.983-003
0.20	5.396-002	9.247-001	1.847-005	1.636-004	4.894-002	1.520-001	1.900-003	3.248-003	1.027-001	1.523-001	1.997-003	9.748-003
0.30	1.699-001	1.780+000	4.037-005	2.449-004	1.021-001	2.037-001	4.039-003	3.892-003	2.614-001	2.092-001	5.237-003	1.756-002
0.40	7.193-001	4.034+000	8.423-005	3.442-004	1.651-001	2.261-001	7.303-003	3.430-003	6.694-001	2.315-001	1.556-002	3.671-002
0.50	2.958+001	-1.429+000	5.904-004	1.084-005	4.352-002	1.922-001	4.378-003	-1.879-002	9.214-001	-4.471+000	2.645-001	-7.685-002
0.60	6.240-001	-4.701+000	9.057-006	3.016-004	2.554-001	2.958-001	2.873-003	1.753-003	-6.235-001	-8.432-002	-4.527-003	-4.266-002
0.70	1.580-001	-2.494+000	2.972-005	4.177-004	3.101-001	2.743-001	4.749-003	9.038-004	-2.699-001	4.577-002	-4.213-003	-2.191-002
0.80	7.458-002	-1.715+000	5.017-005	5.092-004	3.478-001	2.530-001	5.078-003	-4.531-005	-1.367-001	5.728-002	-3.780-003	-1.461-002
0.90	4.346-002	-1.309+000	8.022-005	5.965-004	3.736-001	2.312-001	4.856-003	-6.814-004	-7.055-002	4.616-002	-3.673-003	-1.036-002
1.00	2.510-002	-1.050+000	1.253-004	6.785-004	3.899-001	2.110-001	4.501-003	-9.465-004	-3.588-002	3.109-002	-3.504-003	-7.034-003
1.10	1.158-002	-8.620-001	1.875-004	7.489-004	3.993-001	1.943-001	4.291-003	-9.561-004	-1.711-002	1.842-002	-2.913-003	-3.997-003
1.20	2.331-003	-7.106-001	2.666-004	7.994-004	4.042-001	1.819-001	4.365-003	-9.598-004	-4.551-003	9.162-003	-1.545-003	-1.097-003
1.30	8.729-004	-5.759-001	3.628-004	8.178-004	4.067-001	1.735-001	4.655-003	-1.311-003	8.994-003	-1.954-004	1.124-003	1.575-003
1.40	2.049-002	-4.447-001	4.734-004	7.717-004	4.071-001	1.693-001	4.671-003	-2.414-003	2.517-002	-2.100-002	6.208-003	3.239-003
1.50	1.055-001	-3.313-001	5.187-004	5.758-004	4.061-001	1.730-001	2.757-003	-3.896-003	2.005-002	-7.395-002	1.468-002	-7.627-004
1.60	2.086-001	-3.710-001	2.078-004	4.411-004	4.195-001	1.856-001	-1.736-004	-1.173-003	-6.756-002	-8.764-002	1.271-002	-1.484-002
1.70	1.478-001	-4.093-001	2.497-005	6.921-004	4.409-001	1.809-001	2.026-003	1.429-003	-9.041-002	-1.484-002	1.539-003	-1.555-002
1.80	9.302-002	-3.452-001	4.423-005	8.793-004	4.536-001	1.710-001	3.949-003	9.790-004	-6.440-002	2.016-002	-2.541-003	-1.152-002
1.90	6.551-002	-3.097-001	8.963-005	1.001-003	4.626-001	1.614-001	4.639-003	-6.038-005	-3.959-002	3.003-002	-3.921-003	-8.587-003
2.00	4.980-002	-2.571-001	1.416-004	1.097-003	4.692-001	1.519-001	4.594-003	-9.580-004	-2.144-002	2.936-002	-4.619-003	-6.373-003
2.10	3.848-002	-2.078-001	2.042-004	1.176-003	4.736-001	1.425-001	4.176-003	-1.519-003	-9.280-003	2.439-002	-5.020-003	-4.362-003
2.20	2.864-002	-1.600-001	2.776-004	1.231-003	4.758-001	1.339-001	3.646-003	-1.720-003	-2.079-003	1.823-002	-5.068-003	-2.331-003
2.30	1.930-002	-1.118-001	3.537-004	1.255-003	4.762-001	1.267-001	3.187-003	-1.638-003	1.818-003	1.273-002	-4.598-003	-2.831-004
2.40	1.057-002	-6.139-002	4.155-004	1.242-003	4.756-001	1.213-001	2.873-003	-1.395-003	4.020-003	8.422-003	-3.446-003	1.594-003
2.50	3.617-003	-6.994-003	4.471-004	1.197-003	4.746-001	1.180-001	2.687-003	-1.072-003	5.653-003	4.767-003	-1.553-003	2.908-003
2.60	1.071-003	5.224-002	3.917-004	1.151-003	4.742-001	1.165-001	2.616-003	-6.424-004	6.449-003	8.545-004	7.837-004	3.065-003
2.70	6.002-003	1.140-001	2.871-004	1.163-003	4.752-001	1.161-001	2.821-003	-8.457-005	5.071-003	-2.574-003	2.558-003	1.774-003
2.80	1.689-002	1.735-001	1.922-004	1.262-003	4.778-001	1.156-001	3.472-003	3.139-004	2.398-003	-2.937-003	2.752-003	-4.094-005
2.90	2.776-002	2.309-001	1.577-004	1.400-003	4.812-001	1.143-001	4.311-003	1.923-004	1.820-003	-3.234-004	1.732-003	-1.075-003
3.00	3.565-002	2.914-001	1.691-004	1.530-003	4.848-001	1.121-001	4.916-003	-3.925-004	4.692-003	2.360-003	4.356-004	-1.090-003
3.10	4.098-002	3.604-001	2.031-004	1.646-003	4.882-001	1.090-001	5.109-003	-1.155-003	9.692-003	3.109-003	-7.031-004	-3.672-004
3.20	4.477-002	4.428-001	2.523-004	1.752-003	4.911-001	1.053-001	4.927-003	-1.840-003	1.523-002	1.581-003	-1.573-003	9.204-004
3.30	4.784-002	5.453-001	3.164-004	1.846-003	4.930-001	1.010-001	4.512-003	-2.290-003	2.021-002	-1.673-003	-2.081-003	2.737-003
3.40	5.103-002	6.787-001	3.927-004	1.923-003	4.939-001	9.669-002	4.036-003	-2.456-003	2.475-002	-5.733-003	-2.076-003	5.085-003
3.50	5.576-002	8.628-001	4.739-004	1.980-003	4.938-001	9.280-002	3.658-003	-2.382-003	2.955-002	-9.962-003	-1.359-003	7.975-003
3.60	6.484-002	1.139+000	5.505-004	2.016-003	4.929-001	8.968-002	3.480-003	-2.177-003	3.648-002	-1.437-002	3.286-004	1.149-002
3.70	8.588-002	1.604+000	6.154-004	2.041-003	4.916-001	8.747-002	3.539-003	-1.983-003	4.895-002	-2.033-002	3.446-003	1.606-002
3.80	1.501-001	2.592+000	6.712-004	2.066-003	4.903-001	8.616-002	3.825-003	-1.956-003	7.710-002	-3.278-002	9.446-003	2.344-002
3.90	5.842-001	6.286+000	7.531-004	2.109-003	4.887-001	8.532-002	4.368-003	-2.422-003	1.790-001	-8.543-002	2.884-002	4.577-002
4.00	1.771+000	-1.449+001	5.539-004	2.021-003	4.922-001	8.824-002	3.324-003	-1.047-003	-4.093-001	1.005-001	-4.192-002	-8.484-002
4.50	3.688-002	-9.437-001	6.440-004	2.546-003	4.989-001	8.163-002	3.562-003	-3.451-003	-2.735-002	2.719-002	-9.244-003	-9.399-003
5.00	5.740-002	-3.637-001	6.348-004	2.397-003	4.981-001	7.115-002	2.114-003	-1.042-003	-2.178-002	1.203-002	-3.427-003	-1.060-002

Table A31b
Pressure Coefficients
$T = 0.05 \quad H = 5.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	4.301-009 -2.438-002	8.820-011 -5.000-004	4.520-009 -2.562-002	3.060-009 -2.437-002	6.204-011 -4.998-004	3.216-009 -2.562-002
0.05	2.581-006 -1.229-001	5.259-008 -2.502-003	2.695-006 -1.279-001	1.890-006 -1.215-001	3.850-008 -2.479-003	1.973-006 -1.278-001
0.10	3.565-005 -2.522-001	7.116-007 -5.021-003	3.651-005 -2.544-001	3.022-005 -2.409-001	6.031-007 -4.834-003	3.091-005 -2.535-001
0.15	1.270-004 -3.958-001	2.450-006 -7.579-003	1.265-004 -3.783-001	1.533-004 -3.562-001	2.953-006 -6.945-003	1.511-004 -3.751-001
0.20	1.156-004 -5.653-001	2.161-006 -1.022-002	1.215-004 -4.986-001	4.898-004 -4.652-001	8.943-006 -8.697-003	4.558-004 -4.907-001
0.30	-6.465-003 -1.080+000	-9.748-005 -1.620-002	-4.489-003 -7.255-001	2.727-003 -6.559-001	4.169-005 -1.072-002	2.056-003 -6.968-001
0.40	-1.389-003 -2.446+000	-1.493-003 -2.588-002	-5.925-002 -9.316-001	1.320-002 -7.907-001	1.432-004 -1.022-002	6.042-003 -8.598-001
0.50	-1.735+001 -1.724+000	-8.101-002 -7.164-003	-2.113-001 2.281-001	3.024-001 -1.019+000	1.415-003 -7.857-003	4.351-003 -9.937-001
0.60	-8.117-001 2.606+000	2.894-003 -7.664-003	4.867-001 -1.104+000	-7.624-003 -1.034+000	2.737-005 -1.211-003	4.629-003 -1.020+000
0.70	-3.433-001 1.347+000	5.071-003 -1.720-002	5.190-001 -1.273+000	-7.694-003 -9.960-001	1.034-004 7.692-003	8.338-003 -1.007+000
0.80	-2.147-001 8.800-001	6.542-003 -2.261-002	6.268-001 -1.378+000	-7.217-003 -9.125-001	1.843-004 1.852-002	9.252-003 -9.327-001
0.90	-1.458-001 6.180-001	7.873-003 -2.700-002	7.658-001 -1.448+000	-6.714-003 -7.764-001	2.837-004 3.038-002	8.403-003 -7.993-001
1.00	-9.506-002 4.331-001	8.967-003 -3.105-002	9.216-001 -1.489+000	-5.450-003 -5.938-001	3.787-004 4.211-002	6.580-003 -6.154-001
1.10	-5.118-002 2.773-001	9.588-003 -3.513-002	1.085+000 -1.498+000	-3.164-003 -3.762-001	3.975-004 5.242-002	4.368-003 -3.926-001
1.20	-1.157-002 1.209-001	9.219-003 -3.961-002	1.248+000 -1.472+000	-6.743-004 -1.381-001	2.280-004 6.008-002	1.788-003 -1.452-001
1.30	1.583-002 -7.124-002	6.526-003 -4.492-002	1.400+000 -1.405+000	-3.991-004 1.050-001	-2.577-004 5.404-002	-1.584-003 1.115-001
1.40	-2.512-002 -3.552-001	-2.324-003 -5.059-002	1.533+000 -1.269+000	-7.668-003 3.385-001	-1.174-003 6.364-002	-5.521-003 3.630-001
1.50	-3.957-001 -7.187-001	-2.500-002 -4.594-002	1.692+000 -9.937-001	-3.111-002 5.605-001	-2.246-003 5.905-002	-5.497-003 5.949-001
1.60	-1.109+000 -3.700-001	-3.117-002 -5.630-003	2.100+000 -7.109-001	-3.628-002 7.849-001	-1.271-003 4.959-002	8.188-004 7.803-001
1.70	-9.517-001 2.371-001	-4.453-004 9.068-003	2.421+000 -6.850-001	-2.922-003 9.328-001	-1.919-004 3.260-002	-7.429-003 9.138-001
1.80	-6.569-001 3.784-001	1.600-002 3.851-003	2.573+000 -5.914-001	1.409-002 1.004+000	-3.930-004 1.116-002	-1.668-002 1.000+000
1.90	-4.710-001 3.839-001	2.313-002 -1.325-003	2.688+000 -4.196-001	2.148-002 1.016+000	-8.594-004 -1.317-002	-2.078-002 1.028+000
2.00	-3.483-001 3.615-001	2.644-002 -4.807-003	2.783+000 -2.025-001	2.490-002 9.659-001	-1.371-003 -3.899-002	-2.030-002 9.905-001
2.10	-2.564-001 3.334-001	2.766-002 -7.071-003	2.858+000 4.284-002	2.504-002 8.573-001	-1.860-003 -6.448-002	-1.687-002 8.899-001
2.20	-1.805-001 3.030-001	2.723-002 -8.463-003	2.906+000 3.101-001	2.146-002 6.970-001	-2.176-003 -8.760-002	-1.230-002 7.319-001
2.30	-1.131-001 2.683-001	2.508-002 -9.077-003	2.925+000 5.943-001	1.446-002 4.964-001	-2.088-003 -1.064-001	-7.894-003 5.271-001
2.40	-5.212-002 2.240-001	2.088-002 -8.609-003	2.912+000 8.936-001	6.130-003 2.698-001	-1.407-003 -1.194-001	-4.037-003 2.894-001
2.50	-3.650-003 1.624-001	1.436-002 -6.005-003	2.867+000 1.207+000	3.368-004 3.178-002	-1.831-004 -1.254-001	-4.690-004 3.431-002
2.60	1.296-002 8.211-002	6.411-003 7.306-004	2.795+000 1.532+000	1.096-003 -2.060-001	1.106-003 -1.237-001	3.131-003 -2.220-001
2.70	-2.516-002 9.379-003	7.089-004 1.262-002	2.706+000 1.858+000	7.522-003 -4.353-001	1.762-003 -1.134-001	7.569-003 -4.629-001
2.80	-1.014-001 -9.692-003	9.882-004 2.589-002	2.595+000 2.164+000	1.127-002 -6.444-001	1.785-003 -9.382-002	1.456-002 -6.744-001
2.90	-1.650-001 2.907-002	5.302-003 3.541-002	2.448+000 2.445+000	7.174-003 -8.137-001	1.901-003 -6.547-002	2.375-002 -8.461-001
3.00	-1.952-001 9.319-002	9.487-003 4.072-002	2.259+000 2.705+000	-1.812-003 -9.273-001	2.403-003 -3.025-002	3.177-002 -9.690-001
3.10	-2.010-001 1.610-001	1.178-002 4.368-002	2.030+000 2.947+000	-1.148-002 -9.772-001	3.162-003 9.543-003	3.557-002 -1.034+000
3.20	-1.940-001 2.279-001	1.213-002 4.572-002	1.767+000 3.169+000	-1.890-002 -9.610-001	4.034-003 5.129-002	3.435-002 -1.034+000
3.30	-1.818-001 2.959-001	1.092-002 4.758-002	1.475+000 3.368+000	-2.174-002 -8.813-001	4.865-003 9.203-002	2.934-002 -9.679-001
3.40	-1.679-001 3.710-001	8.526-003 4.961-002	1.157+000 3.539+000	-1.857-002 -7.456-001	5.384-003 1.287-001	2.273-002 -8.389-001
3.50	-1.549-001 4.614-001	5.279-003 5.205-002	8.167-001 3.678+000	-9.980-003 -5.966-001	5.233-003 1.585-001	1.632-002 -6.560-001
3.60	-1.454-001 5.821-001	1.529-003 5.513-002	4.578-001 3.784+000	4.645-004 -3.602-001	4.124-003 1.791-001	1.061-002 -4.321-001
3.70	-1.440-001 7.681-001	-2.283-003 5.910-002	8.553-002 3.853+000	5.752-003 -1.445-001	2.000-003 1.888-001	4.831-003 -1.821-001
3.80	-1.594-001 1.137+000	-5.498-003 6.445-002	-2.932-001 3.883+000	-7.151-003 5.731-002	-9.680-004 1.865-001	-2.425-003 7.875-002
3.90	-1.946-001 2.437+000	-6.179-003 7.372-002	-6.575-001 3.868+000	-9.451-002 1.734-001	-4.739-003 1.715-001	-1.293-002 3.368-001
4.00	1.204+000 -4.268+000	-1.520-002 5.490-002	-1.191+000 3.799+000	2.510-001 9.632-001	-6.087-003 1.456-001	-1.177-002 5.658-001
4.50	2.055-001 -5.872-001	-3.216-002 5.705-002	-3.036+000 2.943+000	1.123-001 1.038+000	-1.416-002 -1.126-001	-2.823-002 1.037+000
5.00	5.171-001 -2.709-001	-2.153-002 5.435-003	-4.373+000 1.165+000	3.880-003 7.349-002	-1.063-003 -2.535-001	-1.035-003 6.912-002

Table A32.
Impedance Coefficients
$T = 0.1 \quad H = 5.0$

ka	Z_1		Z_2		Z_3		Z_1'		Z_2'		Z_3'	
0.01	1.134-004	3.878-002	1.968-007	2.934-005	1.348-004	8.471-003	1.030-005	3.848-004	2.473-004	8.531-003	9.447-006	8.596-004
0.05	2.859-003	1.956-001	4.896-006	1.465-004	3.356-003	4.213-002	2.564-004	1.905-003	6.196-003	4.247-002	2.367-004	4.317-003
0.10	1.177-002	4.018-001	1.931-005	2.915-004	1.325-002	8.282-002	1.012-003	3.689-003	2.498-002	8.379-002	9.535-004	8.759-003
0.15	2.791-002	6.320-001	4.250-005	4.344-004	2.919-002	1.207-001	2.227-003	5.245-003	5.707-002	1.230-001	2.178-003	1.350-002
0.20	5.400-002	9.052-001	7.363-005	5.750-004	5.042-002	1.547-001	3.850-003	6.480-003	1.042-001	1.592-001	3.988-003	1.882-002
0.30	1.697-001	1.740+000	1.601-004	8.584-004	1.050-001	2.065-001	8.156-003	7.728-003	2.650-001	2.210-001	1.042-002	3.377-002
0.40	7.171-001	3.949+000	3.315-004	1.208-003	1.700-001	2.290-001	1.469-002	6.774-003	6.792-001	2.533-001	3.083-002	7.046-002
0.50	2.855+001	-7.755-001	2.221-003	-5.107-005	4.743-002	1.781-001	1.063-002	-3.722-002	1.169+000	-4.424+000	5.039-001	-1.399-001
0.60	6.279-001	-4.639+000	3.756-005	1.003-003	2.569-001	3.003-001	5.714-003	3.008-003	-6.323-001	-1.132-001	-9.414-003	-8.289-002
0.70	1.571-001	-2.461+000	1.229-004	1.424-003	3.136-001	2.787-001	9.418-003	1.345-003	-2.759-001	3.377-002	-8.645-003	-4.254-002
0.80	7.313-002	-1.694+000	2.095-004	1.750-003	3.525-001	2.572-001	1.001-002	-5.597-004	-1.408-001	5.085-002	-7.729-003	-2.837-002
0.90	4.204-002	-1.294+000	3.364-004	2.059-003	3.792-001	2.349-001	9.501-003	-1.827-003	-7.351-002	4.251-002	-7.456-003	-2.010-002
1.00	2.390-002	-1.039+000	5.238-004	2.343-003	3.960-001	2.143-001	8.738-003	-2.365-003	-3.798-002	2.905-002	-7.035-003	-1.359-002
1.10	1.075-002	-8.546-001	7.766-004	2.576-003	4.057-001	1.971-001	8.286-003	-2.341-003	-1.859-002	1.736-002	-5.749-003	-7.705-003
1.20	1.959-003	-7.061-001	1.091-003	2.726-003	4.108-001	1.843-001	8.401-003	-2.388-003	-5.620-003	8.640-003	-2.912-003	-2.103-003
1.30	1.021-003	-5.741-001	1.467-003	2.748-003	4.133-001	1.757-001	8.915-003	-3.065-003	7.742-003	-6.649-004	2.493-003	2.963-003
1.40	2.170-002	-4.446-001	1.894-003	2.511-003	4.138-001	1.715-001	8.789-003	-5.251-003	2.329-002	-2.182-002	1.278-002	5.945-003
1.50	1.111-001	-3.348-001	2.020-003	1.667-003	4.135-001	1.757-001	4.672-003	-7.858-003	1.427-002	-7.454-002	2.972-002	-3.172-003
1.60	2.086-001	-3.859-001	7.063-004	1.216-003	4.287-001	1.866-001	-3.356-004	-1.733-003	-7.384-002	-7.751-002	2.326-002	-3.135-002
1.70	1.426-001	-4.193-001	8.836-005	2.229-003	4.486-001	1.803-001	4.555-003	2.550-003	-8.685-002	-5.413-003	1.412-003	-3.086-002
1.80	9.004-002	-3.747-001	2.079-004	2.915-003	4.603-001	1.706-001	8.066-003	1.210-003	-5.906-002	2.539-002	-6.023-003	-2.275-002
1.90	6.384-002	-3.212-001	4.101-004	3.346-003	4.691-001	1.614-001	9.136-003	-9.715-004	-3.464-002	3.293-002	-8.564-003	-1.700-002
2.00	4.853-002	-2.710-001	6.388-004	3.677-003	4.759-001	1.521-001	8.817-003	-2.745-003	-1.714-002	3.097-002	-9.860-003	-1.259-002
2.10	3.724-002	-2.241-001	9.072-004	3.928-003	4.805-001	1.426-001	7.819-003	-3.778-003	-5.839-003	2.511-002	-1.052-002	-8.538-003
2.20	2.731-002	-1.787-001	1.207-003	4.076-003	4.829-001	1.339-001	6.674-003	-4.058-003	4.238-004	1.836-002	-1.040-002	-4.485-003
2.30	1.795-002	-1.330-001	1.500-003	4.124-003	4.835-001	1.264-001	5.725-003	-3.793-003	3.343-003	1.250-002	-9.183-003	-5.175-004
2.40	9.378-003	-8.514-002	1.708-003	3.971-003	4.828-001	1.208-001	5.123-003	-3.200-003	4.560-003	7.956-003	-6.614-003	2.959-003
2.50	2.797-003	-3.371-002	1.738-003	3.747-003	4.819-001	1.172-001	4.794-003	-2.472-003	5.089-003	4.090-003	-2.669-003	5.130-003
2.60	9.545-004	2.193-002	1.494-003	3.559-003	4.815-001	1.154-001	4.752-003	-1.532-003	4.478-003	1.316-004	1.929-003	4.844-003
2.70	6.847-003	7.886-002	1.048-003	3.648-003	4.826-001	1.146-001	5.361-003	-4.147-004	1.535-003	-2.760-003	5.007-003	1.719-003
2.80	1.819-002	1.319-001	7.024-004	4.082-003	4.849-001	1.138-001	6.848-003	1.834-004	-2.160-003	-2.074-003	4.700-003	-2.030-003
2.90	2.858-002	1.816-001	6.250-004	4.626-003	4.880-001	1.123-001	8.514-003	-3.532-004	-3.082-003	1.242-003	2.171-003	-3.858-003
3.00	3.542-002	2.332-001	7.250-004	5.112-003	4.914-001	1.102-001	9.545-003	-1.741-003	-5.862-004	3.950-003	-6.329-004	-3.590-003
3.10	3.941-002	2.913-001	9.081-004	5.526-003	4.948-001	1.072-001	9.692-003	-3.358-003	3.543-003	4.260-003	-2.951-003	-1.911-003
3.20	4.156-002	3.595-001	1.147-003	5.884-003	4.978-001	1.035-001	9.097-003	-4.709-003	7.528-003	2.103-003	-4.604-003	8.018-004
3.30	4.258-002	4.424-001	1.434-003	6.179-003	5.000-001	9.919-002	8.084-003	-5.512-003	1.026-002	-1.746-003	-5.416-003	4.406-003
3.40	4.312-002	5.470-001	1.748-003	6.394-003	5.010-001	9.470-002	7.022-003	-5.711-003	1.145-002	-6.279-003	-5.133-003	8.777-003
3.50	4.401-002	6.849-001	2.051-003	6.524-003	5.010-001	9.059-002	6.217-003	-5.437-003	1.166-002	-1.074-002	-3.484-003	1.375-002
3.60	4.649-002	8.776-001	2.305-003	6.588-003	5.002-001	8.724-002	5.836-003	-4.937-003	1.170-002	-1.514-002	-2.098-004	1.923-002
3.70	5.311-002	1.171+000	2.491-003	6.629-003	4.990-001	8.488-002	5.899-003	-4.478-003	1.266-002	-2.044-002	5.055-003	2.534-002
3.80	7.148-002	1.681+000	2.620-003	6.696-003	4.977-001	8.356-002	6.309-003	-4.299-003	1.550-002	-2.942-002	1.324-002	3.308-002
3.90	1.366-001	2.822+000	2.751-003	6.829-003	4.967-001	8.322-002	6.878-003	-4.621-003	2.237-002	-5.030-002	2.820-002	4.670-002
4.00	7.529-001	8.007+000	3.122-003	7.050-003	4.959-001	8.434-002	7.088-003	-5.970-003	3.983-002	-1.475-001	8.620-002	1.001-001
4.50	8.433-002	-1.183+000	2.593-003	8.553-003	5.065-001	7.644-002	6.283-003	-7.371-003	-7.078-003	4.544-002	-2.570-002	-2.927-002
5.00	7.544-002	-4.155-001	2.387-003	6.914-003	5.062-001	6.487-002	2.967-003	-2.101-003	-1.557-002	1.360-002	-7.264-004	-2.643-002

Table A32b
Pressure Coefficients
$T = 0.1 \quad H = 5.0$

ka	p_1^0		p_2^0		p_3^0		p_1^{90}		p_2^{90}		p_3^{90}	
0.01	5.198-009	-2.376-002	2.188-010	-1.000-003	5.744-009	-2.625-002	5.993-009	-2.375-002	2.508-010	-9.997-004	6.622-009	-2.625-002
0.05	3.140-006	-1.197-001	1.313-007	-5.004-003	3.448-006	-1.310-001	3.722-006	-1.184-001	1.557-007	-4.956-003	4.087-006	-1.309-001
0.10	4.451-005	-2.456-001	1.823-006	-1.003-002	4.794-005	-2.606-001	5.948-005	-2.345-001	2.436-006	-9.652-003	6.399-005	-2.595-001
0.15	1.715-004	-3.852-001	6.782-006	-1.514-002	1.792-004	-3.875-001	3.015-004	-3.461-001	1.191-005	-1.384-002	3.127-004	-3.839-001
0.20	2.558-004	-5.498-001	9.668-006	-2.039-002	2.648-004	-5.107-001	9.619-004	-4.510-001	3.601-005	-1.727-002	9.430-004	-5.018-001
0.30	-5.671-003	-1.049+000	-1.749-004	-3.218-002	-4.137-003	-7.437-001	5.340-003	-6.307-001	1.670-004	-2.106-002	4.256-003	-7.118-001
0.40	-1.342-001	-2.371+000	-2.930-003	-5.093-002	-6.128-002	-9.603-001	2.583-002	-7.414-001	5.691-004	-1.954-002	1.261-002	-8.778-001
0.50	-1.648+001	-2.054+000	-1.510-001	-1.694-002	-3.620-001	2.314-001	5.858-001	-1.068+000	5.375-003	-1.589-002	1.404-002	-1.042+000
0.60	-8.057-001	2.535+000	6.569-003	-1.715-002	5.091-001	-1.087+000	-1.444-002	-1.070+000	1.147-004	-1.183-003	8.625-003	-1.044+000
0.70	-3.361-001	1.309+000	1.075-002	-3.590-002	5.477-001	-1.266+000	-1.510-002	-1.007+000	4.319-004	1.748-002	1.624-002	-1.032+000
0.80	-2.059-001	8.538-001	1.360-002	-4.672-002	6.628-001	-1.372+000	-1.437-002	-9.152-001	7.771-004	3.979-002	1.809-002	-9.568-001
0.90	-1.356-001	5.975-001	1.611-002	-5.555-002	8.095-001	-1.440+000	-1.345-002	-7.743-001	1.201-003	6.389-002	1.634-002	-8.212-001
1.00	-8.414-002	4.157-001	1.807-002	-6.367-002	9.726-001	-1.477+000	-1.090-002	-5.889-001	1.599-003	8.727-002	1.277-002	-6.328-001
1.10	-4.022-002	2.617-001	1.902-002	-7.174-002	1.143+000	-1.480+000	-6.268-003	-3.707-001	1.663-003	1.072-001	8.460-003	-4.037-001
1.20	-1.307-003	1.064-001	1.794-002	-8.047-002	1.311+000	-1.448+000	-1.295-003	-1.350-001	9.424-004	1.212-001	3.467-003	-1.494-001
1.30	2.404-002	-8.504-002	1.209-002	-9.073-002	1.467+000	-1.370+000	-8.642-004	1.018-001	-1.052-003	1.273-001	-3.077-003	1.148-001
1.40	-2.275-002	-3.729-001	-6.554-003	-1.013-001	1.604+000	-1.221+000	-1.578-002	3.266-001	-4.743-003	1.248-001	-1.067-002	3.754-001
1.50	-4.246-001	-7.331-001	-5.315-002	-8.821-002	1.773+000	-9.308-001	-6.350-002	5.521-001	-8.833-003	1.158-001	-9.999-003	6.183-001
1.60	-1.125+000	-3.134-001	-5.710-002	-4.411-003	2.189+000	-6.590-001	-6.768-002	8.174-001	-4.362-003	9.707-002	9.922-004	8.024-001
1.70	-9.182-001	2.702-001	5.852-003	1.786-002	2.483+000	-6.237-001	-1.184-003	9.700-001	-6.857-004	5.854-002	-1.673-002	9.338-001
1.80	-6.259-001	3.916-001	3.643-002	5.449-003	2.623+000	-5.049-001	3.104-002	1.031+000	-1.866-003	1.179-002	-3.402-002	1.026+000
1.90	-4.458-001	3.915-001	4.926-002	-5.321-003	2.731+000	-3.108-001	4.543-002	1.032+000	-3.971-003	-3.955-002	-4.096-0[illegible]	1.059+000
2.00	-3.262-001	3.671-001	5.486-002	-1.249-002	2.821+000	-7.553-002	5.202-002	9.724-001	-6.248-003	-9.270-002	-3.91[illegible]	1.025+000
2.10	-2.367-001	3.369-001	5.627-002	-1.710-002	2.887+000	1.859-001	5.166-002	8.549-001	-8.346-003	-1.437-001	-3.176[illegible]	9.229-001
2.20	-1.631-001	3.035-001	5.425-002	-1.976-002	2.925+000	4.668-001	4.351-002	6.876-001	-9.558-003	-1.882-001	-2.274[illegible]02	7.594-001
2.30	-9.853-002	2.646-001	4.866-002	-2.060-002	2.930+000	7.623-001	2.864-002	4.841-001	-8.940-003	-2.227-001	-1.448-002	5.465-001
2.40	-4.148-002	2.145-001	3.895-002	-1.872-002	2.901+000	1.071+000	1.171-002	2.604-001	-[illegible]43-003	-2.440-001	-7.448-003	2.996-001
2.50	1.103-003	1.454-001	2.470-002	-1.193-002	2.838+000	1.391+000	5.802-004	3.049-002	-7.350-004	-2.514-001	-8.826-004	3.545-002
2.60	7.748-003	5.710-002	8.343-003	4.000-003	2.747+000	1.720+000	2.674-003	-1.984-001	4.263-003	-2.438-001	6.102-003	-2.288-001
2.70	-4.443-002	-1.946-002	-1.719-003	3.032-002	2.635+000	2.044+000	1.465-002	-4.252-001	6.496-003	-2.185-001	1.540-002	-4.760-001
2.80	-1.313-001	-3.583-002	1.439-003	5.757-002	2.498+000	2.345+000	1.897-002	-6.388-001	6.590-003	-1.728-001	3.007-002	-6.932-001
2.90	-1.979-001	4.809-003	1.182-002	7.555-002	2.320+000	2.620+000	7.287-003	-8.115-001	7.609-003	-1.084-001	4.823-002	-8.728-001
3.00	-2.271-001	6.519-002	2.066-002	8.480-002	2.099+000	2.873+000	-1.282-002	-9.227-001	1.041-002	-3.062-002	6.289-002	-1.005+000
3.10	-2.311-001	1.240-001	2.507-002	8.965-002	1.839+000	3.107+000	-3.275-002	-9.647-001	1.428-002	5.472-002	6.861-002	-1.079+000
3.20	-2.219-001	1.771-001	2.537-002	9.291-002	1.548+000	3.318+000	-4.665-002	-9.367-001	1.852-002	1.416-001	6.452-002	-1.084+000
3.30	-2.064-001	2.263-001	2.244-002	9.590-002	1.229+000	3.502+000	-5.007-002	-8.442-001	2.227-002	2.232-001	5.367-002	-1.018+000
3.40	-1.879-001	2.747-001	1.702-002	9.924-002	8.856-001	3.654+000	-4.105-002	-6.990-001	2.420-002	2.932-001	4.065-002	-8.822-001
3.50	-1.679-001	3.266-001	9.789-003	1.034-001	5.218-001	3.771+000	-2.214-002	-5.180-001	2.287-002	3.460-001	2.884-002	-6.889-001
3.60	-1.476-001	3.874-001	1.410-003	1.086-001	1.416-001	3.849+000	-1.300-003	-3.204-001	1.744-002	3.779-001	1.877-002	-4.529-001
3.70	-1.283-001	4.681-001	-7.297-003	1.153-001	-2.507-001	3.887+000	8.657-003	-1.250-001	8.173-003	3.861-001	8.589-003	-1.906-001
3.80	-1.114-001	5.959-001	-1.529-002	1.237-001	-6.498-001	3.882+000	-1.004-002	4.847-002	-3.815-003	3.692-001	-4.281-003	8.239-002
3.90	-9.334-002	8.679-001	-2.114-002	1.341-001	-1.050+000	3.831+000	-9.238-002	1.648-001	-1.748-002	3.262-001	-2.143-002	3.523-001
4.00	3.469-002	2.019+000	-1.997-002	1.503-001	-1.434+000	3.727+000	-4.871-001	7.149-003	-3.465-002	2.574-001	-4.371-002	6.111-001
4.50	2.402-001	-7.412-001	-7.148-002	1.060-001	-3.375+000	2.657+000	3.071-001	1.221+000	-5.760-002	-3.032-001	-4.810-002	1.105+000
5.00	5.768-001	-1.244-001	-1.482-002	-1.717-003	-4.551+000	6.760-001	2.246-003	8.540-002	-4.037-003	-5.106-001	-1.316-003	7.165-002

Table A33a
Impedance Coefficients
$T = 0.2 \quad H = 5.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	9.619-005	3.540-002	7.682-007	1.014-004	1.455-004	8.923-003	2.114-005	7.659-004	2.366-004	8.145-003	1.719-005	1.528-003
0.05	2.422-003	1.784-001	1.909-005	5.057-004	3.620-003	4.436-002	5.258-004	3.787-003	5.922-003	4.051-002	4.301-004	7.664-003
0.10	9.921-003	3.658-001	7.503-005	1.005-003	1.427-002	8.711-002	2.069-003	7.314-003	2.379-002	7.973-002	1.726-003	1.551-002
0.15	2.332-002	5.732-001	1.642-004	1.493-003	3.134-002	1.268-001	4.535-003	1.035-002	5.405-002	1.165-001	3.914-003	2.379-002
0.20	4.454-002	8.162-001	2.819-004	1.970-003	5.392-002	1.622-001	7.790-003	1.270-002	9.788-002	1.499-001	7.087-003	3.294-002
0.30	1.331-001	1.533+000	5.940-004	2.913-003	1.112-001	2.162-001	1.616-002	1.486-002	2.415-001	2.047-001	1.778-002	5.769-002
0.40	4.861-001	3.245+000	1.121-003	4.021-003	1.776-001	2.415-001	2.758-002	1.290-002	5.710-001	2.339-001	4.668-002	1.128-001
0.50	1.175+001	1.382+001	5.961-003	5.831-003	2.018-001	1.560-001	6.309-002	-2.511-002	2.775+000	-1.211+000	5.293-001	3.709-001
0.60	9.115-001	-5.486+000	9.830-005	3.017-003	2.676-001	3.141-001	9.298-003	4.276-003	-7.760-001	-1.778-001	-1.849-002	-1.928-001
0.70	1.881-001	-2.645+000	4.899-004	4.750-003	3.288-001	2.872-001	1.828-002	1.072-003	-3.119-001	2.548-002	-1.905-002	-8.973-002
0.80	8.255-002	-1.769+000	8.782-004	5.946-003	3.690-001	2.637-001	1.934-002	-2.892-003	-1.578-001	4.648-002	-1.694-002	-5.826-002
0.90	4.605-002	-1.334+000	1.435-003	7.035-003	3.963-001	2.399-001	1.800-002	-5.406-003	-8.481-002	3.855-002	-1.620-002	-4.079-002
1.00	2.581-002	-1.066+000	2.228-003	7.987-003	4.134-001	2.179-001	1.621-002	-6.268-003	-4.735-002	2.523-002	-1.512-002	-2.754-002
1.10	1.174-002	-8.755-001	3.249-003	8.702-003	4.229-001	1.997-001	1.515-002	-6.074-003	-2.747-002	1.389-002	-1.230-002	-1.589-002
1.20	2.493-003	-7.249-001	4.457-003	9.084-003	4.276-001	1.863-001	1.528-002	-5.933-003	-1.464-002	5.698-003	-6.571-003	-5.240-003
1.30	6.378-004	-5.933-001	5.838-003	8.994-003	4.297-001	1.777-001	1.614-002	-7.180-003	-2.031-003	-2.862-003	3.750-003	4.204-003
1.40	1.792-002	-4.657-001	7.377-003	7.995-003	4.304-001	1.740-001	1.572-002	-1.107-002	1.176-002	-2.205-002	2.286-002	9.941-003
1.50	9.939-002	-3.518-001	7.905-003	4.774-003	4.315-001	1.782-001	8.068-003	-1.542-002	2.502-003	-6.912-002	5.551-002	-5.717-003
1.60	2.067-001	-3.930-001	2.853-003	2.753-003	4.478-001	1.870-001	-6.346-004	-3.437-003	-8.065-002	-6.842-002	4.640-002	-6.207-002
1.70	1.460-001	-4.350-001	3.467-004	6.753-003	4.663-001	1.790-001	9.692-003	3.772-003	-8.755-002	3.849-003	1.646-003	-6.296-002
1.80	9.299-002	-3.954-001	9.422-004	9.433-003	4.768-001	1.697-001	1.606-002	3.868-005	-5.634-002	3.147-002	-1.399-002	-4.666-002
1.90	6.607-002	-3.459-001	1.901-003	1.103-002	4.854-001	1.610-001	1.729-002	-4.683-003	-3.085-002	3.607-002	-1.945-002	-3.483-002
2.00	4.982-002	-2.993-001	2.981-003	1.215-002	4.925-001	1.518-001	1.582-002	-8.095-003	-1.337-002	3.179-002	-2.209-002	-2.550-002
2.10	3.752-002	-2.559-001	4.183-003	1.285-002	4.975-001	1.422-001	1.325-002	-9.682-003	-2.870-003	2.426-002	-2.304-002	-1.693-002
2.20	2.681-002	-2.138-001	5.413-003	1.315-002	5.001-001	1.331-001	1.073-002	-9.661-003	2.272-003	1.667-002	-2.205-002	-8.686-003
2.30	1.712-002	-1.716-001	6.459-003	1.290-002	5.006-001	1.252-001	8.964-003	-8.553-003	4.051-003	1.068-002	-1.878-002	-1.141-003
2.40	8.649-003	-1.280-001	7.048-003	1.206-002	4.998-001	1.194-001	8.119-003	-6.959-003	4.357-003	6.494-003	-1.307-002	4.897-003
2.50	2.366-003	-8.194-002	6.894-003	1.113-002	4.988-001	1.157-001	7.934-003	-5.303-003	4.167-003	3.292-003	-5.150-003	8.063-003
2.60	6.848-004	-3.291-002	5.733-003	1.067-002	4.984-001	1.138-001	8.458-003	-3.488-003	2.975-003	4.143-004	3.527-003	6.357-003
2.70	6.528-003	1.618-002	3.943-003	1.095-002	4.993-001	1.128-001	1.037-002	-1.651-003	-8.377-005	-8.171-004	8.863-003	-4.948-004
2.80	1.779-002	5.976-002	2.689-003	1.281-002	5.013-001	1.119-001	1.369-002	-1.391-003	-2.889-003	1.705-003	7.293-003	-8.372-003
2.90	2.780-002	9.770-002	2.608-003	1.504-002	5.041-001	1.107-001	1.673-002	-3.512-003	-2.036-003	6.205-003	1.275-003	-1.202-002
3.00	3.362-002	1.348-001	3.307-003	1.694-002	5.074-001	1.090-001	1.797-002	-7.018-003	2.329-003	9.125-003	-5.060-003	-1.113-002
3.10	3.588-002	1.749-001	4.388-003	1.843-002	5.111-001	1.065-001	1.722-002	-1.047-002	7.818-003	8.963-003	-9.994-003	-7.244-003
3.20	3.572-002	2.204-001	5.681-003	1.954-002	5.146-001	1.030-001	1.507-002	-1.288-002	1.237-002	6.174-003	-1.304-002	-1.433-003
3.30	3.401-002	2.735-001	7.055-003	2.023-002	5.172-001	9.852-002	1.241-002	-1.381-002	1.496-002	2.104-003	-1.388-002	5.576-003
3.40	3.149-002	3.366-001	8.340-003	2.053-002	5.185-001	9.380-002	1.013-002	-1.343-002	1.570-002	-1.821-003	-1.232-002	1.306-002
3.50	2.871-002	4.134-001	9.365-003	2.053-002	5.186-001	8.945-002	8.738-003	-1.226-002	1.537-002	-4.811-003	-8.388-003	2.032-002
3.60	2.603-002	5.092-001	1.003-002	2.041-002	5.178-001	8.598-002	8.396-003	-1.093-002	1.502-002	-6.770-003	-2.280-003	2.682-002
3.70	2.391-002	6.335-001	1.034-002	2.039-002	5.165-001	8.361-002	8.954-003	-9.960-003	1.539-002	-8.265-003	5.741-003	3.221-002
3.80	2.302-002	8.035-001	1.042-002	2.066-002	5.153-001	8.235-002	1.012-002	-9.711-003	1.691-002	-1.012-002	1.540-002	3.639-002
3.90	2.639-002	1.053+000	1.049-002	2.133-002	5.145-001	8.202-002	1.149-002	-1.043-002	1.948-002	-1.347-002	2.660-002	3.988-002
4.00	4.082-002	1.462+000	1.082-002	2.237-002	5.145-001	8.234-002	1.255-002	-1.224-002	2.325-002	-1.966-002	4.034-002	4.450-002
4.50	1.543-001	-1.655+000	1.996-002	2.133-002	5.266-001	7.910-002	-2.273-003	-1.899-002	-2.160-002	-2.442-002	6.353-002	-1.149-002
5.00	6.085-003	-5.822-001	1.985-002	1.713-002	5.252-001	6.665-002	-1.634-003	-9.623-003	-2.736-004	-1.890-003	1.254-002	-3.185-004

Table A33b
Pressure Coefficients
$T = 0.2 \quad H = 5.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	1.154-008 -2.251-002	1.026-009 -2.000-003	1.410-008 -2.750-002	1.127-008 -2.250-002	9.986-010 -1.999-003	1.377-008 -2.750-002
0.05	7.134-006 -1.133-001	6.299-007 -1.000-002	8.665-006 -1.372-001	7.010-006 -1.121-001	6.189-007 -9.906-003	8.514-006 -1.371-001
0.10	1.100-004 -2.319-001	9.515-006 -2.003-002	1.311-004 -2.726-001	1.116-004 -2.217-001	9.653-006 -1.925-002	1.329-004 -2.717-001
0.15	5.190-004 -3.623-001	4.335-005 -3.013-002	5.991-004 -4.046-001	5.618-004 -3.263-001	4.691-005 -2.749-002	6.468-004 -4.014-001
0.20	1.449-003 -5.138-001	1.149-004 -4.043-002	1.598-003 -5.318-001	1.774-003 -4.235-001	1.406-004 -3.412-002	1.938-003 -5.243-001
0.30	3.072-003 -9.563-001	2.087-004 -6.288-002	3.203-003 -7.688-001	9.474-003 -5.835-001	6.317-004 -4.080-002	8.552-003 -7.421-001
0.40	-5.072-002 -2.013+000	-2.403-003 -9.513-002	-2.515-002 -9.818-001	4.075-002 -6.612-001	1.963-003 -3.619-002	2.391-002 -9.148-001
0.50	-5.737+000 -9.366+000	-1.312-001 -2.120-001	-6.452-001 -8.187-001	6.419-001 -4.127-001	1.471-002 -1.715-002	7.577-002 -1.075+000
0.60	-1.120+000 3.112+000	1.133-002 -2.703-002	5.746-001 -1.099+000	-3.075-002 -1.191+000	3.059-004 8.998-004	1.506-002 -1.091+000
0.70	-4.087-001 1.478+000	2.199-002 -7.213-002	5.969-001 -1.291+000	-3.492-002 -1.043+000	1.755-003 4.197-002	3.280-002 -1.082+000
0.80	-2.470-001 9.453-001	2.781-002 -9.535-002	7.225-001 -1.390+000	-3.267-002 -9.263-001	3.322-003 8.908-002	3.630-002 -1.007+000
0.90	-1.669-001 6.605-001	3.256-002 -1.136-001	8.842-001 -1.448+000	-3.004-002 -7.731-001	5.226-003 1.387-001	3.225-002 -8.670-001
1.00	-1.120-001 4.644-001	3.599-002 -1.298-001	1.063+000 -1.472+000	-2.391-002 -5.807-001	6.933-003 1.851-001	2.464-002 -6.691-001
1.10	-6.799-002 3.027-001	3.743-002 -1.453-001	1.246+000 -1.460+000	-1.362-002 -3.605-001	7.092-003 2.223-001	1.608-002 -4.272-001
1.20	-3.036-002 1.445-001	3.520-002 -1.613-001	1.426+000 -1.408+000	-2.931-003 -1.293-001	3.925-003 2.456-001	6.537-003 -1.581-001
1.30	-4.851-003 -4.469-002	2.446-002 -1.798-001	1.594+000 -1.306+000	-1.371-003 9.592-002	-4.270-003 2.519-001	-5.741-003 1.219-001
1.40	-4.191-002 -3.248-001	-9.500-003 -1.990-001	1.744+000 -1.130+000	-2.917-002 3.039-001	-1.884-002 2.418-001	-1.945-002 4.009-001
1.50	-4.072-001 -6.983-001	-9.724-002 -1.767-001	1.928+000 -8.193-001	-1.225-001 5.304-001	-3.524-002 2.249-001	-1.691-002 6.646-001
1.60	-1.140+000 -3.327-001	-1.110-001 -1.192-002	2.346+000 -5.385-001	-1.403-001 8.801-001	-1.796-002 1.918-001	2.800-003 8.457-001
1.70	-9.514-001 2.786-001	1.719-002 3.434-002	2.614+000 -4.867-001	6.005-004 1.055+000	-2.743-003 9.824-002	-3.707-002 9.741-001
1.80	-6.504-001 4.048-001	7.840-002 7.486-003	2.730+000 -3.304-001	7.095-002 1.093+000	-8.620-003 -1.042-002	-7.082-002 1.081+000
1.90	-4.646-001 4.022-001	1.027-001 -1.525-002	2.818+000 -9.642-002	1.028-001 1.071+000	-1.877-002 -1.232-001	-8.116-002 1.129+000
2.00	-3.404-001 3.733-001	1.118-001 -3.010-002	2.888+000 1.757-001	1.165-001 9.890-001	-2.973-002 -2.346-001	-7.354-002 1.101+000
2.10	-2.473-001 3.372-001	1.121-001 -3.895-002	2.931+000 4.698-001	1.132-001 8.508-001	-3.924-002 -3.356-001	-5.645-002 9.954-001
2.20	-1.716-001 2.973-001	1.053-001 -4.298-002	2.942+000 7.778-001	9.250-002 6.683-001	-4.369-002 -4.180-001	-3.830-002 8.188-001
2.30	-1.066-001 2.525-001	9.192-002 -4.192-002	2.915+000 1.096+000	5.886-002 4.597-001	-3.926-002 -4.746-001	-2.361-002 5.875-001
2.40	-5.019-002 1.981-001	7.128-002 -3.441-002	2.848+000 1.423+000	2.331-002 2.426-001	-2.458-002 -5.030-001	-1.216-002 3.208-001
2.50	-8.112-003 1.266-001	4.299-002 -1.682-002	2.744+000 1.756+000	1.124-003 2.815-002	-2.974-003 -5.045-001	-1.487-003 3.780-002
2.60	-7.449-004 3.686-002	1.199-002 1.885-002	2.608+000 2.090+000	5.121-003 -1.851-001	1.668-002 -4.768-001	1.095-002 -2.428-001
2.70	-5.189-002 -4.151-002	-5.368-003 7.298-002	2.448+000 2.409+000	2.707-002 -4.103-001	2.492-002 -4.130-001	2.998-002 -5.033-001
2.80	-1.392-001 -5.868-002	3.679-003 1.279-001	2.255+000 2.696+000	3.087-002 -6.379-001	2.573-002 -2.997-001	6.110-002 -7.349-001
2.90	-2.057-001 -1.586-002	2.641-002 1.630-001	2.015+000 2.952+000	-3.447-004 -8.230-001	3.237-002 -1.428-001	9.716-002 -9.354-001
3.00	-2.327-001 4.789-002	4.505-002 1.802-001	1.728+000 3.183+000	-4.884-002 -9.323-001	4.840-002 3.990-002	1.219-001 -1.093+000
3.10	-2.324-001 1.095-001	5.412-002 1.885-001	1.405+000 3.390+000	-9.373-002 -9.577-001	7.035-002 2.312-001	1.255-001 -1.189+000
3.20	-2.178-001 1.638-001	5.445-002 1.937-001	1.054+000 3.569+000	-1.205-001 -9.040-001	9.352-002 4.148-001	1.095-001 -1.204+000
3.30	-1.964-001 2.118-001	4.777-002 1.982-001	6.797-001 3.712+000	-1.206-001 -7.859-001	1.117-001 5.749-001	8.352-002 -1.132+000
3.40	-1.723-001 2.561-001	3.561-002 2.034-001	2.868-001 3.815+000	-9.401-002 -6.252-001	1.177-001 6.992-001	5.843-002 -9.783-001
3.50	-1.477-001 2.987-001	1.928-002 2.104-001	-1.205-001 3.874+000	-5.099-002 -4.459-001	1.065-001 7.800-001	3.977-002 -7.601-001
3.60	-1.242-001 3.421-001	1.348-004 2.197-001	-5.376-001 3.887+000	-9.395-003 -2.677-001	7.739-002 8.135-001	2.622-002 -4.974-001
3.70	-1.039-001 3.894-001	-2.029-002 2.320-001	-9.596-001 3.850+000	9.988-003 -1.034-001	3.461-002 7.969-001	1.254-002 -2.087-001
3.80	-9.106-002 4.468-001	-4.007-002 2.474-001	-1.381+000 3.763+000	-1.182-002 4.138-002	-1.548-002 7.272-001	-6.502-003 9.028-002
3.90	-9.097-002 5.283-001	-5.695-002 2.658-001	-1.797+000 3.625+000	-8.829-002 1.642-001	-6.796-002 6.009-001	-3.291-002 3.874-001
4.00	-1.091-001 6.682-001	-6.880-002 2.862-001	-2.203+000 3.435+000	-2.319-001 2.535-001	-1.224-001 4.181-001	-6.322-002 6.720-001
4.50	3.860-001 7.836-001	6.615-002 3.387-001	-3.984+000 1.778+000	-6.943-001 1.021+000	-4.520-001 -7.095-001	4.889-002 1.281+000
5.00	5.643-002 1.219-001	3.837-002 2.095-001	-4.651+000 -4.998-001	-1.087-002 5.940-002	-3.423-002 -1.027+000	2.639-003 8.084-002

Table A34a
Impedance Coefficients
$T = 0.3 \quad H = 5.0$

ka	Z_1	Z_2	Z_3	Z'_1	Z'_2	Z'_3
0.01	8.551-005 3.592-002	1.697-006 2.080-004	1.560-004 9.381-003	3.254-005 1.136-003	2.310-004 7.436-003	2.407-005 2.191-003
0.05	2.153-003 1.811-001	4.215-005 1.038-003	3.879-003 4.661-002	8.087-004 5.614-003	5.780-003 3.694-002	6.026-004 1.100-002
0.10	8.825-003 3.721-001	1.653-004 2.061-003	1.526-002 9.144-002	3.176-003 1.081-002	2.321-002 7.243-002	2.416-003 2.229-002
0.15	2.078-002 5.849-001	3.605-004 3.059-003	3.342-002 1.329-001	6.939-003 1.521-002	5.268-002 1.052-001	5.474-003 3.429-002
0.20	3.980-002 8.368-001	6.163-004 4.031-003	5.728-002 1.696-001	1.187-002 1.853-002	9.534-002 1.342-001	9.905-003 4.771-002
0.30	1.216-001 1.602+000	1.287-003 5.964-003	1.170-001 2.252-001	2.437-002 2.115-002	2.362-001 1.776-001	2.501-002 8.531-002
0.40	4.865-001 3.580+000	2.452-003 8.361-003	1.842-001 2.508-001	4.135-002 1.724-002	5.771-001 1.849-001	6.904-002 1.770-001
0.50	2.793+001 1.306+001	2.105-002 6.725-003	1.118-001 1.700-001	7.378-002 -9.742-002	2.635+000 -3.749+000	1.533+000 2.987-001
0.60	5.712-001 -4.770+000	4.581-004 6.578-003	2.938-001 3.140-001	2.052-002 6.967-003	-6.114-001 -1.962-002	-3.142-002 -2.378-001
0.70	1.417-001 -2.456+000	1.287-003 9.787-003	3.490-001 2.900-001	2.969-002 -3.298-004	-2.476-001 7.116-002	-2.654-002 -1.200-001
0.80	6.801-002 -1.682+000	2.190-003 1.221-002	3.886-001 2.665-001	2.974-002 -6.818-003	-1.194-001 6.928-002	-2.409-002 -8.010-002
0.90	3.973-002 -1.285+000	3.525-003 1.442-002	4.158-001 2.419-001	2.673-002 -1.066-002	-5.820-002 5.184-002	-2.345-002 -5.661-002
1.00	2.257-002 -1.036+000	5.390-003 1.627-002	4.326-001 2.188-001	2.337-002 -1.179-002	-2.792-002 3.344-002	-2.190-002 -3.813-002
1.10	1.007-002 -8.563-001	7.710-003 1.753-002	4.415-001 1.998-001	2.139-002 -1.132-002	-1.290-002 1.906-002	-1.748-002 -2.171-002
1.20	1.878-003 -7.130-001	1.036-002 1.805-002	4.454-001 1.861-001	2.128-002 -1.107-002	-3.598-003 8.675-003	-8.697-003 -6.786-003
1.30	9.079-004 -5.866-001	1.334-002 1.755-002	4.468-001 1.776-001	2.204-002 -1.303-002	5.896-003 -2.247-003	6.959-003 6.368-003
1.40	2.027-002 -4.615-001	1.666-002 1.497-002	4.470-001 1.748-001	2.015-002 -1.873-002	1.517-002 -2.490-002	3.649-002 1.380-002
1.50	1.130-001 -3.524-001	1.716-002 7.100-003	4.500-001 1.811-001	6.416-003 -2.246-002	-7.796-003 -7.348-002	8.689-002 -1.582-002
1.60	2.115-001 -4.192-001	4.717-003 4.419-003	4.702-001 1.857-001	-3.106-004 1.975-005	-9.447-002 -4.585-002	5.840-002 -1.014-001
1.70	1.397-001 -4.523-001	9.554-004 1.373-002	4.849-001 1.749-001	1.782-002 4.813-003	-8.046-002 2.509-002	-5.791-003 -9.230-002
1.80	8.975-002 -4.117-001	2.893-003 1.909-002	4.935-001 1.665-001	2.529-002 -3.322-003	-4.530-002 4.423-002	-2.576-002 -6.758-002
1.90	6.434-002 -3.651-001	5.378-003 2.219-002	5.019-001 1.588-001	2.520-002 -1.097-002	-2.002-002 4.362-002	-3.298-002 -5.002-002
2.00	4.820-002 -3.220-001	8.095-003 2.416-002	5.093-001 1.498-001	2.152-002 -1.575-002	-3.944-003 3.577-002	-3.622-002 -3.571-002
2.10	3.552-002 -2.817-001	1.096-002 2.521-002	5.145-001 1.400-001	1.671-002 -1.738-002	4.507-003 2.583-002	-3.653-002 -2.258-002
2.20	2.453-002 -2.424-001	1.359-002 2.514-002	5.171-001 1.305-001	1.266-002 -1.641-002	7.413-003 1.688-002	-3.358-002 -1.047-002
2.30	1.492-002 -2.032-001	1.548-002 2.376-002	5.174-001 1.223-001	1.023-002 -1.396-002	7.222-003 1.028-002	-2.723-002 -1.860-004
2.40	6.890-003 -1.629-001	1.617-002 2.161-002	5.163-001 1.163-001	9.307-003 -1.109-002	5.856-003 5.754-003	-1.774-002 7.161-003
2.50	1.361-003 -1.207-001	1.514-002 1.958-002	5.150-001 1.125-001	9.433-003 -8.243-003	3.999-003 2.255-003	-5.678-003 9.752-003
2.60	8.761-004 -7.632-002	1.206-002 1.862-002	5.144-001 1.105-001	1.098-002 -5.146-003	7.614-004 -5.269-004	6.443-003 4.915-003
2.70	8.264-003 -3.346-002	8.081-003 2.061-002	5.151-001 1.093-001	1.502-002 -2.790-003	-4.234-003 -4.574-004	1.203-002 -7.310-003
2.80	2.033-002 1.894-003	6.026-003 2.535-002	5.165-001 1.083-001	2.080-002 -3.837-003	-7.399-003 4.131-003	6.663-003 -1.899-002
2.90	2.973-002 3.045-002	6.844-003 3.039-002	5.187-001 1.075-001	2.489-002 -8.783-003	-5.352-003 9.687-003	-4.351-003 -2.283-002
3.00	3.401-002 5.750-002	9.345-003 3.423-002	5.219-001 1.064-001	2.532-002 -1.513-002	2.579-004 1.207-002	-1.450-002 -1.949-002
3.10	3.432-002 8.660-002	1.256-002 3.689-002	5.259-001 1.043-001	2.246-002 -2.044-002	6.127-003 1.036-002	-2.143-002 -1.189-002
3.20	3.213-002 1.195-001	1.598-002 3.833-002	5.298-001 1.007-001	1.784-002 -2.328-002	9.936-003 5.879-003	-2.455-002 -2.086-003
3.30	2.862-002 1.575-001	1.913-002 3.871-002	5.327-001 9.598-002	1.320-002 -2.350-002	1.098-002 6.126-004	-2.379-002 8.315-003
3.40	2.466-002 2.013-001	2.163-002 3.833-002	5.340-001 9.085-002	9.815-003 -2.185-002	9.929-003 -3.847-003	-1.955-002 1.797-002
3.50	2.068-002 2.521-001	2.324-002 3.764-002	5.338-001 8.618-002	8.183-003 -1.946-002	7.996-003 -6.948-003	-1.253-002 2.598-002
3.60	1.676-002 3.118-001	2.399-002 3.713-002	5.326-001 8.253-002	8.176-003 -1.727-002	6.185-003 -8.987-003	-3.487-003 3.180-002
3.70	1.301-002 3.836-001	2.410-002 3.722-002	5.310-001 8.010-002	9.381-003 -1.595-002	4.945-003 -1.068-002	6.863-003 3.508-002
3.80	1.008-002 4.727-001	2.400-002 3.824-002	5.295-001 7.891-002	1.129-002 -1.591-002	4.178-003 -1.273-002	1.759-002 3.563-002
3.90	9.551-003 5.868-001	2.430-002 4.024-002	5.284-001 7.877-002	1.325-002 -1.749-002	3.527-003 -1.551-002	2.751-002 3.389-002
4.00	1.379-002 7.380-001	2.563-002 4.290-002	5.283-001 7.936-002	1.432-002 -2.072-002	2.759-003 -1.928-002	3.589-002 3.150-002
4.50	2.830+000 1.288+001	4.703-002 3.923-002	5.411-001 7.541-002	-1.073-002 -2.718-002	-1.219-001 -2.617-001	5.283-001 7.762-002
5.00	4.219-002 -1.040+000	4.374-002 3.785-002	5.366-001 6.147-002	-2.099-003 -1.583-002	2.958-003 2.483-002	-6.544-002 -8.014-003

Table A34b
Pressure Coefficients
$T = 0.3 \quad H = 5.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	1.588-008 -2.126-002	2.242-009 -3.000-003	2.148-008 -2.875-002	1.596-008 -2.125-002	2.248-009 -2.999-003	2.159-008 -2.875-002
0.05	9.852-006 -1.071-001	1.381-006 -1.500-002	1.324-005 -1.434-001	9.935-006 -1.058-001	1.393-006 -1.485-002	1.335-005 -1.433-001
0.10	1.539-004 -2.194-001	2.110-005 -3.001-002	2.027-004 -2.846-001	1.580-004 -2.089-001	2.167-005 -2.880-002	2.081-004 -2.838-001
0.15	7.454-004 -3.435-001	9.847-005 -4.510-002	9.486-004 -4.216-001	7.949-004 -3.064-001	1.050-004 -4.098-002	1.009-003 -4.190-001
0.20	2.189-003 -4.890-001	2.736-004 -6.044-002	2.649-003 -5.529-001	2.509-003 -3.956-001	3.132-004 -5.061-002	3.012-003 -5.467-001
0.30	7.397-003 -9.254-001	7.748-004 -9.381-002	7.809-003 -7.941-001	1.349-002 -5.342-001	1.395-003 -5.939-002	1.317-002 -7.726-001
0.40	-3.623-002 -2.054+000	-2.488-003 -1.431-001	-1.533-002 -1.004+000	6.110-002 -5.611-001	4.374-003 -4.992-002	3.668-002 -9.527-001
0.50	-1.442+001 -9.571+000	-4.032-001 -2.628-001	-6.516-001 -1.637-001	1.889+000 -4.492-001	5.293-002 -3.039-002	9.182-002 -1.212+000
0.60	-7.627-001 2.542+000	2.259-002 -6.464-002	5.446-001 -1.192+000	-5.090-002 -1.217+000	1.453-003 8.133-003	3.277-002 -1.137+000
0.70	-3.186-001 1.284+000	3.437-002 -1.197-001	6.118-001 -1.337+000	-4.897-002 -1.051+000	4.697-003 7.316-002	5.395-002 -1.134+000
0.80	-1.956-001 8.399-001	4.252-002 -1.522-001	7.627-001 -1.418+000	-4.698-002 -9.247-001	8.444-003 1.470-001	5.671-002 -1.060+000
0.90	-1.284-001 5.918-001	4.888-002 -1.788-001	9.455-001 -1.462+000	-4.404-002 -7.647-001	1.308-002 2.231-001	4.875-002 -9.161-001
1.00	-8.055-002 4.147-001	5.297-002 -2.025-001	1.142+000 -1.471+000	-3.513-002 -5.682-001	1.710-002 2.919-001	3.621-002 -7.082-001
1.10	-4.206-002 2.640-001	5.399-002 -2.246-001	1.341+000 -1.441+000	-1.966-002 -3.481-001	1.716-002 3.440-001	2.317-002 -4.523-001
1.20	-9.563-003 1.123-001	4.959-002 -2.473-001	1.532+000 -1.367+000	-3.946-003 -1.229-001	9.301-003 3.726-001	9.298-003 -1.676-001
1.30	1.029-002 -7.563-002	3.203-002 -2.736-001	1.707+000 -1.237+000	-2.589-003 8.968-002	-9.944-003 3.746-001	-8.012-003 1.296-001
1.40	-4.076-002 -3.560-001	-2.335-002 -3.001-001	1.867+000 -1.023+000	-4.742-002 2.813-001	-4.337-002 3.543-001	-2.552-002 4.288-001
1.50	-4.816-001 -7.398-001	-1.642-001 -2.480-001	2.088+000 -6.691-001	-1.957-001 5.256-001	-7.795-002 3.370-001	-1.356-002 7.100-001
1.60	-1.193+000 -2.116-001	-1.378-001 1.517-002	2.534+000 -4.348-001	-1.801-001 9.722-001	-3.027-002 2.854-001	1.615-003 8.736-001
1.70	-9.013-001 3.498-001	5.674-002 4.584-002	2.730+000 -3.675-001	3.183-002 1.133+000	-7.705-003 1.168-001	-7.011-002 1.016+000
1.80	-6.037-001 4.375-001	1.353-001 -2.263-003	2.812+000 -1.582-001	1.285-001 1.145+000	-2.698-002 -6.418-002	-1.143-001 1.147+000
1.90	-4.251-001 4.225-001	1.641-001 -3.760-002	2.879+000 1.216-001	1.741-001 1.099+000	-5.412-002 -2.447-001	-1.212-001 1.212+000
2.00	-3.058-001 3.862-001	1.719-001 -5.982-002	2.928+000 4.318-001	1.915-001 9.940-001	-8.229-002 -4.157-001	-1.025-001 1.190+000
2.10	-2.153-001 3.430-001	1.664-001 -7.210-002	2.947+000 7.570-001	1.803-001 8.349-001	-1.047-001 -5.637-001	-7.305-002 1.076+000
2.20	-1.437-001 2.957-001	1.511-001 -7.508-002	2.928+000 1.090+000	1.417-001 6.399-001	-1.118-001 -6.745-001	-4.632-002 8.824-001
2.30	-8.377-002 2.435-001	1.265-001 -6.845-002	2.865+000 1.427+000	8.611-002 4.307-001	-9.590-002 -7.415-001	-2.751-002 6.301-001
2.40	-3.341-002 1.812-001	9.231-002 -5.098-002	2.757+000 1.768+000	3.198-002 2.241-001	-5.745-002 -7.681-001	-1.426-002 3.424-001
2.50	7.313-004 1.010-001	4.814-002 -1.682-002	2.608+000 2.109+000	1.247-003 2.606-002	-6.658-003 -7.582-001	-1.828-003 4.013-002
2.60	-4.690-003 2.882-003	3.712-003 4.588-002	2.427+000 2.442+000	9.587-003 -1.765-001	3.574-002 -7.065-001	1.483-002 -2.563-001
2.70	-7.342-002 -7.647-002	-1.390-002 1.359-001	2.219+000 2.748+000	3.760-002 -4.098-001	5.204-002 -5.906-001	4.552-002 -5.298-001
2.80	-1.729-001 -8.426-002	1.098-002 2.183-001	1.969+000 3.010+000	2.754-002 -6.575-001	5.875-002 -3.861-001	9.684-002 -7.804-001
2.90	-2.403-001 -3.137-002	5.218-002 2.654-001	1.663+000 3.236+000	-3.727-002 -8.509-001	8.658-002 -1.096-001	1.502-001 -1.011+000
3.00	-2.623-001 3.708-002	8.261-002 2.850-001	1.311+000 3.436+000	-1.215-001 -9.475-001	1.394-001 1.985-001	1.780-001 -1.203+000
3.10	-2.549-001 9.842-002	9.629-002 2.922-001	9.264-001 3.608+000	-1.897-001 -9.441-001	2.053-001 5.063-001	1.694-001 -1.322+000
3.20	-2.323-001 1.483-001	9.527-002 2.954-001	5.198-001 3.745+000	-2.191-001 -8.568-001	2.681-001 7.828-001	1.337-001 -1.342+000
3.30	-2.029-001 1.880-001	8.255-002 2.987-001	9.760-002 3.839+000	-2.017-001 -7.136-001	3.087-001 1.007+000	9.100-002 -1.256+000
3.40	-1.711-001 2.203-001	6.083-002 3.044-001	-3.354-001 3.883+000	-1.462-001 -5.456-001	3.112-001 1.166+000	5.760-002 -1.079+000
3.50	-1.389-001 2.473-001	3.255-002 3.140-001	-7.750-001 3.875+000	-7.456-002 -3.777-001	2.694-001 1.256+000	3.806-002 -8.324-001
3.60	-1.076-001 2.701-001	1.150-005 3.283-001	-1.216+000 3.812+000	-1.341-002 -2.242-001	1.887-001 1.276+000	2.666-002 -5.422-001
3.70	-7.914-002 2.895-001	-3.419-002 3.485-001	-1.652+000 3.694+000	1.242-002 -8.808-002	8.218-002 1.220+000	1.396-002 -2.273-001
3.80	-5.760-002 3.065-001	-6.656-002 3.750-001	-2.078+000 3.519+000	-1.381-002 3.727-002	-3.632-002 1.079+000	-7.759-003 9.851-002
3.90	-4.897-002 3.264-001	-9.264-002 4.069-001	-2.489+000 3.287+000	-9.330-002 1.628-001	-1.605-001 8.429-001	-4.059-002 4.255-001
4.00	-5.756-002 3.616-001	-1.084-001 4.410-001	-2.880+000 2.999+000	-2.110-001 2.887-001	-2.956-001 5.121-001	-7.711-002 7.457-001
4.50	3.833-001 4.570+000	3.265-002 5.096-001	-4.410+000 9.272-001	-6.095+000 1.109-001	-1.086+000 -1.245+000	1.071-001 1.409+000
5.00	1.739-001 -5.128-001	-1.272-001 2.846-001	-4.509+000 -1.580+000	5.741-002 6.162-002	-7.687-002 -1.563+000	2.046-003 8.910-002

Table 35a
Impedance Coefficients
$T = 0.5 \quad H = 5.0$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	6.485-005	3.298-002	4.552-006	5.028-004	1.773-004	1.024-002	5.682-005	1.881-003	2.145-004	6.609-003	3.436-005	3.085-003
0.05	1.631-003	1.653-001	1.129-004	2.506-003	4.404-003	5.082-002	1.410-003	9.276-003	5.360-003	3.278-002	8.581-004	1.548-002
0.10	6.655-003	3.414-001	4.405-004	4.967-003	1.727-002	9.949-002	5.516-003	1.776-002	2.144-002	6.396-002	3.425-003	3.132-002
0.15	1.556-002	5.360-001	9.532-004	7.349-003	3.763-002	1.441-001	1.197-002	2.478-002	4.837-002	9.212-002	7.703-003	4.807-002
0.20	2.953-002	7.656-001	1.612-003	9.644-003	6.407-002	1.832-001	2.030-002	2.981-002	8.684-002	1.161-001	1.380-002	6.669-002
0.30	8.762-002	1.453+000	3.255-003	1.413-002	1.288-001	2.417-001	4.061-002	3.279-002	2.100-001	1.483-001	3.377-002	1.182-001
0.40	3.279-001	3.158+000	5.764-003	1.953-002	1.992-001	2.700-001	6.555-002	2.515-002	4.891-001	1.443-001	8.689-002	2.400-001
0.50	1.313+001	1.831+001	3.456-002	3.356-002	2.111-001	2.010-001	1.462-001	-7.228-002	2.799+000	-1.563+000	1.347+000	1.128+000
0.60	5.766-001	-5.043+000	1.513-003	1.581-002	3.227-001	3.271-001	3.731-002	7.425-003	-6.188-001	2.655-002	-5.785-002	-3.893-001
0.70	1.345-001	-2.475+000	4.090-003	2.408-002	3.781-001	3.014-001	5.039-002	-7.258-003	-2.329-001	8.765-002	-4.635-002	-1.883-001
0.80	6.420-002	-1.676+000	7.027-003	3.014-002	4.191-001	2.763-001	4.790-002	-1.877-002	-1.077-001	7.516-002	-4.213-002	-1.240-001
0.90	3.708-002	-1.277+000	1.128-002	3.532-002	4.475-001	2.495-001	4.065-002	-2.473-002	-5.063-002	5.280-002	-4.068-002	-8.628-002
1.00	2.058-002	-1.029+000	1.684-002	3.913-002	4.643-001	2.242-001	3.365-002	-2.548-002	-2.418-002	3.222-002	-3.706-002	-5.699-002
1.10	8.929-003	-8.533-001	2.319-002	4.110-002	4.725-001	2.035-001	2.976-002	-2.360-002	-1.230-002	1.722-002	-2.862-002	-3.196-002
1.20	1.621-003	-7.143-001	2.985-002	4.112-002	4.754-001	1.888-001	2.923-002	-2.252-002	-5.491-003	6.816-003	-1.377-002	-1.035-002
1.30	7.767-004	-5.932-001	3.687-002	3.880-002	4.760-001	1.804-001	2.972-002	-2.516-002	1.209-003	-3.964-003	1.065-002	7.877-003
1.40	1.740-002	-4.737-001	4.443-002	3.177-002	4.763-001	1.784-001	3.543-002	-3.266-002	5.955-003	-2.501-002	5.504-002	1.781-002
1.50	1.018-001	-3.615-001	4.525-002	1.217-002	4.818-001	1.844-001	4.599-003	-3.436-002	-2.117-002	-6.539-002	1.335-001	-2.540-002
1.60	2.210-001	-4.199-001	1.247-002	4.789-003	5.021-001	1.845-001	7.977-004	2.067-003	-1.019-001	-2.721-002	9.573-002	-1.707-001
1.70	1.535-001	-4.751-001	3.282-003	3.167-002	5.125-001	1.733-001	3.243-002	2.064-003	-7.423-002	4.444-002	-2.077-002	-1.587-001
1.80	9.791-002	-4.443-001	1.136-002	4.602-002	5.201-001	1.672-001	3.995-002	-1.591-002	-3.227-002	5.585-002	-5.752-002	-1.120-001
1.90	6.788-002	-4.035-001	2.068-002	5.259-002	5.294-001	1.608-001	3.435-002	-2.861-002	-5.932-003	4.762-002	-6.887-002	-7.736-002
2.00	4.803-002	-3.643-001	2.974-002	5.529-002	5.381-001	1.517-001	2.430-002	-3.387-002	7.731-003	3.401-002	-7.072-002	-4.945-002
2.10	3.297-002	-3.267-001	3.730-002	5.388-002	5.439-001	1.410-001	1.547-002	-3.238-002	1.217-002	2.110-002	-6.558-002	-2.632-002
2.20	2.118-002	-2.901-001	4.255-002	5.018-002	5.463-001	1.305-001	1.006-002	-2.756-002	1.130-002	1.173-002	-5.534-002	-8.286-003
2.30	1.202-002	-2.542-001	4.489-002	4.505-002	5.461-001	1.218-001	8.182-003	-2.198-002	8.468-003	6.074-003	-4.147-002	4.335-003
2.40	5.075-003	-2.185-001	4.411-002	3.993-002	5.445-001	1.155-001	8.671-003	-1.705-002	5.499-003	2.888-003	-2.499-002	1.123-002
2.50	7.162-004	-1.822-001	3.953-002	3.594-002	5.426-001	1.115-001	1.090-002	-1.277-002	2.506-003	8.464-004	-6.631-003	1.070-002
2.60	1.066-003	-1.446-001	3.090-002	3.561-002	5.415-001	1.094-001	1.555-002	-8.997-003	-1.595-003	9.728-006	1.027-002	-6.849-004
2.70	9.373-003	-1.091-001	2.114-002	4.467-002	5.413-001	1.083-001	2.374-002	-8.489-003	-6.567-003	2.908-003	1.580-002	-2.374-002
2.80	2.349-002	-8.280-002	1.829-002	5.849-002	5.418-001	1.081-001	3.324-002	-1.463-002	-7.527-003	1.057-002	1.197-003	-4.451-002
2.90	3.395-002	-6.687-002	2.581-002	7.266-002	5.437-001	1.088-001	3.577-002	-2.737-002	-1.045-003	1.688-002	-2.436-002	-4.755-002
3.00	3.613-002	-5.387-002	3.869-002	8.019-002	5.480-001	1.091-001	2.953-002	-3.867-002	8.172-003	1.633-002	-4.416-002	-3.392-002
3.10	3.261-002	-3.808-002	5.093-002	8.089-002	5.535-001	1.073-001	1.905-002	-4.364-002	1.420-002	1.036-002	-5.178-002	-1.388-002
3.20	2.708-002	-1.817-002	5.994-002	7.767-002	5.584-001	1.031-001	9.460-003	-4.256-002	1.537-002	3.221-003	-4.934-002	4.863-003
3.30	2.166-002	5.129-003	6.541-002	7.320-002	5.615-001	9.751-002	3.221-003	-3.818-002	1.319-002	-2.176-003	-4.084-002	1.917-002
3.40	1.698-002	3.088-002	6.799-002	6.919-002	5.626-001	9.186-002	5.286-004	-3.309-002	9.795-003	-5.076-003	-2.943-002	2.865-002
3.50	1.289-002	5.868-002	6.858-002	6.657-002	5.621-001	8.702-002	5.525-004	-2.886-002	6.647-003	-6.038-003	-1.691-002	3.382-002
3.60	9.065-003	8.881-002	6.808-002	6.591-002	5.605-001	8.348-002	2.323-003	-2.629-002	4.302-003	-5.961-003	-4.202-003	3.510-002
3.70	5.473-003	1.221-001	6.751-002	6.761-002	5.586-001	8.141-002	4.989-003	-2.581-002	2.653-003	-5.540-003	7.849-003	3.245-002
3.80	2.673-003	1.596-001	6.830-002	7.181-002	5.568-001	8.079-002	7.595-003	-2.783-002	1.375-003	-4.950-003	1.770-002	2.574-002
3.90	1.940-003	2.019-001	7.245-002	7.761-002	5.558-001	8.146-002	8.588-003	-3.248-002	5.005-004	-3.930-003	2.277-002	1.602-002
4.00	4.505-003	2.488-001	8.120-002	8.209-002	5.561-001	8.300-002	5.897-003	-3.852-002	6.523-004	-2.696-003	2.127-002	7.241-003
4.50	3.440-002	5.947-001	1.097-001	5.353-002	5.695-001	7.752-002	-2.199-002	-2.640-002	-2.704-003	-1.032-002	3.417-002	2.289-002
5.00	2.289-001	3.315+000	9.818-002	3.595-002	5.647-001	7.081-002	-1.338-002	-1.406-002	-3.029-002	-3.021-002	2.077-001	-3.982-002

Table A35b
Pressure Coefficients
$T = 0.5 \quad H = 5.0$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	2.321-008 -1.876-002	6.187-009 -5.000-003	3.867-008 -3.125-002	2.350-008 -1.875-002	6.258-009 -4.998-003	3.916-008 -3.125-002
0.05	1.444-005 -9.444-002	3.822-006 -2.498-002	2.391-005 -1.557-001	1.462-005 -9.325-002	3.870-006 -2.472-002	2.421-005 -1.557-001
0.10	2.278-004 -1.932-001	5.899-005 -4.989-002	3.699-004 -3.085-001	2.315-004 -1.835-001	5.994-005 -4.777-002	3.758-004 -3.081-001
0.15	1.127-003 -3.817-001	2.808-004 -7.473-002	1.768-003 -4.557-001	1.156-003 -2.676-001	2.880-004 -6.757-002	1.811-003 -4.541-001
0.20	3.446-003 -4.281-001	8.116-004 -9.969-002	5.141-003 -5.951-001	3.613-003 -3.423-001	8.500-004 -8.267-002	5.357-003 -5.915-001
0.30	1.548-002 -8.015-001	3.030-003 -1.525-001	1.960-002 -8.453-001	1.884-002 -4.459-001	3.661-003 -9.386-002	2.284-002 -8.338-001
0.40	2.206-002 -1.727+000	3.167-003 -2.247-001	2.555-002 -1.054+000	7.966-002 -4.130-001	1.067-002 -7.191-002	6.065-002 -1.029+000
0.50	-5.529+000 -1.083+001	-2.863-001 -5.548-001	-5.493-001 -8.569-001	1.733+000 7.312-001	9.019-002 8.756-003	1.912-001 -1.280+000
0.60	-7.700-001 2.602+000	4.236-002 -1.241-001	5.983-001 -1.250+000	-9.577-002 -1.379+000	4.982-003 3.081-002	6.126-002 -1.236+000
0.70	-3.063-001 1.262+000	6.128-002 -2.176-001	6.933-001 -1.369+000	-8.814-002 -1.090+000	1.550-002 1.536-001	9.484-002 -1.246+000
0.80	-1.827-001 8.210-001	7.325-002 -2.731-001	8.810-001 -1.424+000	-8.484-002 -9.269-001	2.811-002 2.870-001	9.482-002 -1.176+000
0.90	-1.161-001 5.775-001	8.067-002 -3.179-001	1.100+000 -1.441+000	-7.896-002 -7.476-001	4.344-002 4.187-001	7.706-002 -1.022+000
1.00	-7.145-002 4.035-001	8.353-002 -3.554-001	1.329+000 -1.419+000	-6.150-002 -5.413-001	5.543-002 5.294-001	5.422-002 -7.914-001
1.10	-3.865-002 2.563-001	8.200-002 -3.877-001	1.551+000 -1.353+000	-3.331-002 -3.225-001	5.354-002 6.033-001	3.354-002 -5.052-001
1.20	-1.294-002 1.102-001	7.333-002 -4.187-001	1.759+000 -1.233+000	-6.468-003 -1.105-001	2.781-002 6.323-001	1.330-002 -1.873-001
1.30	1.206-003 -6.810-002	4.565-002 -4.535-001	1.946+000 -1.048+000	-4.117-003 7.814-002	-2.852-002 6.162-001	-1.125-002 1.453-001
1.40	-4.721-002 -3.430-001	-3.841-002 -4.969-001	2.118+000 -7.737-001	-7.436-002 2.400-001	-1.200-001 5.697-001	-3.350-002 4.838-001
1.50	-4.532-001 -7.221-001	-2.522-001 -4.024-001	2.353+000 -3.757-001	-3.133-001 4.929-001	-2.134-001 5.580-001	-9.620-003 7.975-001
1.60	-1.230+000 -2.401-001	-2.129-001 3.219-002	2.770+000 -1.228-001	-3.099-001 1.141+000	-8.304-002 4.910-001	-1.710-003 9.433-001
1.70	-9.387-001 3.957-001	1.309-001 7.351-002	2.888+000 8.687-004	9.849-002 1.336+000	-2.747-002 1.142-001	-1.330-001 1.117+000
1.80	-6.047-001 4.918-001	2.568-001 -2.772-002	2.908+000 2.970-001	2.899-001 1.273+000	-1.099-001 -2.556-001	-1.879-001 1.308+000
1.90	-4.047-001 4.651-001	2.891-001 -9.772-002	2.923+000 6.560-001	3.705-001 1.149+000	-2.159-001 -5.849-001	-1.714-001 1.407+000
2.00	-2.746-001 4.108-001	2.830-001 -1.373-001	2.918+000 1.029+000	3.814-001 9.743-001	-3.137-001 -8.669-001	-1.197-001 1.383+000
2.10	-1.846-001 3.489-001	2.568-001 -1.683-001	2.872+000 1.399+000	3.315-001 7.690-001	-3.700-001 -1.072+000	-6.813-002 1.239+000
2.20	-1.195-001 2.862-001	2.196-001 -1.380-001	2.775+000 1.761+000	2.399-001 5.597-001	-3.632-001 -1.208+000	-3.570-002 1.003+000
2.30	-6.911-002 2.230-001	1.738-001 -1.098-001	2.621+000 2.114+000	1.356-001 3.640-001	-2.887-001 -1.280+000	-2.106-002 7.083-001
2.40	-2.853-002 1.538-001	1.179-001 -6.477-002	2.412+000 2.456+000	4.643-002 1.876-001	-1.627-001 -1.299+000	-1.329-002 3.820-001
2.50	-2.764-003 6.900-002	5.113-002 6.227-003	2.158+000 2.782+000	1.501-003 2.240-002	-1.804-002 -1.266+000	-2.188-003 4.455-002
2.60	-1.377-002 -3.430-002	-1.345-002 1.201-001	1.868+000 3.080+000	1.585-002 -1.631-001	9.506-002 -1.160+000	2.204-002 -2.841-001
2.70	-9.142-002 -1.252-001	-3.404-002 2.813-001	1.546+000 3.327+000	5.170-002 -4.195-001	1.413-001 -9.070-001	7.598-002 -5.932-001
2.80	-2.153-001 -1.389-001	2.556-002 4.293-001	1.172+000 3.509+000	-7.474-004 -7.247-001	1.851-001 -4.637-001	1.609-001 -9.620-001
2.90	-3.048-001 -6.774-002	1.244-001 5.036-001	7.346-001 3.644+000	-1.743-001 -9.357-001	3.389-001 1.304-001	2.229-001 -1.218+000
3.00	-3.251-001 2.648-002	1.984-001 5.124-001	2.565-001 3.750+000	-3.591-001 -9.669-001	5.989-001 7.211-001	2.112-001 -1.481+000
3.10	-2.995-001 1.013-001	2.241-001 4.950-001	-2.347-001 3.819+000	-4.557-001 -8.595-001	8.636-001 1.211+000	1.411-001 -1.619+000
3.20	-2.561-001 1.495-001	2.121-001 4.787-001	-7.253-001 3.837+000	-4.427-001 -6.926-001	1.044+000 1.585+000	6.165-002 -1.609+000
3.30	-2.100-001 1.776-001	1.763-001 4.733-001	-1.210+000 3.790+000	-3.505-001 -5.239-001	1.095+000 1.862+000	8.577-003 -1.472+000
3.40	-1.664-001 1.932-001	1.271-001 4.803-001	-1.686+000 3.677+000	-2.241-001 -3.789-001	1.015+000 2.057+000	-1.063-002 -1.243+000
3.50	-1.255-001 2.006-001	7.035-002 4.990-001	-2.148+000 3.495+000	-1.028-001 -2.613-001	8.247-001 2.167+000	-7.049-003 -9.516-001
3.60	-8.692-002 2.004-001	1.011-002 5.297-001	-2.587+000 3.247+000	-1.656-002 -1.642-001	5.555-001 2.178+000	3.108-003 -6.202-001
3.70	-5.151-002 1.910-001	-4.888-002 5.744-001	-2.998+000 2.934+000	1.463-002 -7.285-002	2.389-001 2.061+000	6.198-003 -2.620-001
3.80	-2.433-002 1.695-001	-9.765-002 6.354-001	-3.373+000 2.557+000	-1.437-002 3.639-002	-1.073-001 1.782+000	-4.784-003 1.153-001
3.90	-1.604-002 1.375-001	-1.209-001 7.090-001	-3.710+000 2.119+000	-8.023-002 1.872-001	-4.966-001 1.316+000	-2.397-002 5.077-001
4.00	-3.697-002 1.084-001	-1.047-001 7.762-001	-4.009+000 1.627+000	-1.303-001 3.711-002	-9.719-001 6.957-001	-2.534-002 9.030-001
4.50	-1.929-001 2.946-001	1.306-002 6.252-001	-4.650+000 -1.114+000	-4.107-001 4.575-001	-2.628+000 -1.849+000	2.559-001 1.484+000
5.00	-5.309-001 8.576-001	-4.618-002 3.827-001	-3.352+000 -3.750+000	-1.934-001 8.159-002	-1.791-001 -2.560+000	1.035-002 9.008-002

Table A36a
Impedance Coefficients
$T = 2/9 \quad H = 4/9$

ka	Z_1		Z_2		Z_3		Z'_1		Z'_2		Z'_3	
0.01	5.834-006	1.408-003	7.404-006	1.069-003	9.162-006	1.401-003	1.647-005	1.520-003	1.462-005	1.162-003	1.314-005	1.538-003
0.05	1.458-004	7.036-003	1.849-004	5.339-003	2.287-004	6.994-003	4.113-004	7.582-003	3.652-004	5.800-003	3.284-004	7.679-003
0.10	5.824-004	1.406-002	7.372-004	1.064-002	9.105-004	1.393-002	1.639-003	1.507-002	1.456-003	1.152-002	1.311-003	1.530-002
0.15	1.308-003	2.104-002	1.650-003	1.586-002	2.032-003	2.075-002	3.662-003	2.235-002	3.261-003	1.709-002	2.938-003	2.281-002
0.20	2.318-003	2.799-002	2.911-003	2.097-002	3.574-003	2.740-002	6.451-003	2.936-002	5.756-003	2.243-002	5.196-003	3.016-002
0.30	5.175-003	4.167-002	6.413-003	3.071-002	7.793-003	4.000-002	1.414-002	4.216-002	1.270-002	3.213-002	1.152-002	4.415-002
0.40	9.107-003	5.502-002	1.108-002	3.962-002	1.327-002	5.140-002	2.424-002	5.288-002	2.198-002	4.014-002	2.009-002	5.692-002
0.50	1.406-002	6.794-002	1.669-002	4.751-002	1.962-002	6.136-002	3.619-002	6.106-002	3.321-002	4.601-002	3.064-002	6.815-002
0.60	2.000-002	8.038-002	2.304-002	5.424-002	2.643-002	6.977-002	4.934-002	6.641-002	4.595-002	4.942-002	4.293-002	7.760-002
0.70	2.689-002	9.227-002	2.987-002	5.972-002	3.330-002	7.661-002	6.303-002	6.878-002	5.974-002	5.012-002	5.667-002	8.509-002
0.80	3.473-002	1.036-001	3.696-002	6.390-002	3.979-002	8.198-002	7.661-002	6.815-002	7.410-002	4.789-002	7.162-002	9.043-002
0.90	4.354-002	1.142-001	4.408-002	6.678-002	4.556-002	8.607-002	8.943-002	6.463-002	8.855-002	4.260-002	8.754-002	9.347-002
1.00	5.335-002	1.241-001	5.101-002	6.836-002	5.026-002	8.914-002	1.009-001	5.844-002	1.026-001	3.411-002	1.042-001	9.403-002
1.10	6.422-002	1.330-001	5.752-002	6.865-002	5.363-002	9.155-002	1.104-001	4.987-002	1.155-001	2.233-002	1.213-001	9.187-002
1.20	7.620-002	1.408-001	6.337-002	6.772-002	5.546-002	9.373-002	1.173-001	3.937-002	1.267-001	7.233-003	1.385-001	8.673-002
1.30	8.927-002	1.470-001	6.829-002	6.563-002	5.565-002	9.622-002	1.212-001	2.754-002	1.353-001	-1.110-002	1.554-001	7.830-002
1.40	1.033-001	1.514-001	7.196-002	6.254-002	5.423-002	9.962-002	1.214-001	1.518-002	1.402-001	-3.237-002	1.712-001	6.630-002
1.50	1.181-001	1.533-001	7.406-002	5.869-002	5.148-002	1.046-001	1.177-001	3.363-003	1.404-001	-5.589-002	1.851-001	5.055-002
1.60	1.329-001	1.522-001	7.428-002	5.448-002	4.792-002	1.118-001	1.102-001	-6.572-003	1.347-001	-8.045-002	1.958-001	3.120-002
1.70	1.469-001	1.478-001	7.281-002	5.050-002	4.446-002	1.218-001	9.932-002	-1.315-002	1.224-001	-1.042-001	2.019-001	8.902-003
1.80	1.590-001	1.402-001	6.847-002	4.747-002	4.224-002	1.346-001	8.635-002	-1.501-002	1.034-001	-1.247-001	2.022-001	-1.501-002
1.90	1.678-001	1.298-001	6.282-002	4.613-002	4.251-002	1.497-001	7.325-002	-1.136-002	7.886-002	-1.395-001	1.960-001	-3.850-002
2.00	1.724-001	1.180-001	5.614-002	4.706-002	4.624-002	1.662-001	6.229-002	-2.382-003	5.111-002	-1.466-001	1.836-001	-5.924-002
2.10	1.725-001	1.064-001	4.937-002	5.045-002	5.378-002	1.824-001	5.547-002	1.067-002	2.326-002	-1.453-001	1.663-001	-7.513-002
2.20	1.684-001	9.644-002	4.336-002	5.608-002	6.473-002	1.970-001	5.395-002	2.578-002	-1.607-003	-1.364-001	1.463-001	-8.497-002
2.30	1.613-001	8.939-002	3.876-002	6.336-002	7.813-002	2.090-001	5.782-002	4.075-002	-2.133-002	-1.220-001	1.258-001	-8.866-002
2.40	1.523-001	8.573-002	3.584-002	7.163-002	9.280-002	2.179-001	6.626-002	5.383-002	-3.494-002	-1.045-001	1.068-001	-8.699-002
2.50	1.427-001	8.546-002	3.455-002	8.025-002	1.077-001	2.238-001	7.803-002	6.393-002	-4.255-002	-8.613-002	9.039-002	-8.120-002
2.60	1.334-001	8.820-002	3.468-002	8.877-002	1.219-001	2.272-001	9.182-002	7.065-002	-4.495-002	-6.860-002	7.702-002	-7.259-002
2.70	1.247-001	9.347-002	3.594-002	9.693-002	1.351-001	2.287-001	1.065-001	7.401-002	-4.321-002	-5.295-002	6.675-002	-6.224-002
2.80	1.171-001	1.008-001	3.805-002	1.046-001	1.469-001	2.287-001	1.214-001	7.433-002	-3.837-002	-3.973-002	5.931-002	-5.094-002
2.90	1.107-001	1.098-001	4.078-002	1.118-001	1.574-001	2.278-001	1.358-001	7.200-002	-3.131-002	-2.913-002	5.437-002	-3.919-002
3.00	1.054-001	1.202-001	4.397-002	1.185-001	1.666-001	2.263-001	1.494-001	6.741-002	-2.274-002	-2.116-002	5.160-002	-2.728-002
3.10	1.013-001	1.318-001	4.751-002	1.248-001	1.746-001	2.245-001	1.621-001	6.091-002	-1.320-002	-1.573-002	5.072-002	-1.534-002
3.20	9.832-002	1.446-001	5.133-002	1.307-001	1.814-001	2.227-001	1.737-001	5.277-002	-3.077-003	-1.274-002	5.154-002	-3.392-003
3.30	9.646-002	1.585-001	5.542-002	1.364-001	1.874-001	2.209-001	1.842-001	4.319-002	7.352-003	-1.210-002	5.398-002	8.614-003
3.40	9.578-002	1.737-001	5.980-002	1.419-001	1.924-001	2.195-001	1.935-001	3.232-002	1.786-002	-1.377-002	5.805-002	2.076-002
3.50	9.638-002	1.901-001	6.451-002	1.472-001	1.967-001	2.184-001	2.015-001	2.025-002	2.825-002	-1.778-002	6.387-002	3.314-002
3.60	9.847-002	2.082-001	6.964-002	1.523-001	2.004-001	2.178-001	2.082-001	7.012-003	3.833-002	-2.425-002	7.167-002	4.586-002
3.70	1.024-001	2.280-001	7.528-002	1.572-001	2.035-001	2.178-001	2.135-001	-7.378-003	4.785-002	-3.334-002	8.186-002	5.896-002
3.80	1.086-001	2.498-001	8.157-002	1.619-001	2.062-001	2.184-001	2.171-001	-2.293-002	5.647-002	-4.537-002	9.501-002	7.242-002
3.90	1.180-001	2.739-001	8.870-002	1.661-001	2.086-001	2.199-001	2.187-001	-3.965-002	6.367-002	-6.071-002	1.119-001	8.607-002
4.00	1.316-001	3.005-001	9.683-002	1.697-001	2.109-001	2.224-001	2.178-001	-5.750-002	6.864-002	-7.981-002	1.337-001	9.947-002
4.50	3.421-001	4.334-001	1.525-001	1.554-001	2.349-001	2.549-001	1.469-001	-1.418-001	-1.010-002	-2.286-001	3.615-001	8.628-002
5.00	6.068-001	1.038-001	1.019-001	8.613-002	3.175-001	2.484-001	7.260-002	-4.110-002	-2.754-001	-6.927-002	3.634-001	-3.497-001

Table A36b
Pressure Coefficients
$T = 2/9 \quad H = 4/9$

ka	p_1^0	p_2^0	p_3^0	p_1^{90}	p_2^{90}	p_3^{90}
0.01	9.861-011 -1.975-003	1.109-010 -2.222-003	1.233-010 -2.469-003	1.980-010 -1.975-003	1.097-010 -2.222-003	2.475-010 -2.469-003
0.05	6.147-008 -9.874-003	6.914-008 -1.110-002	7.680-008 -1.233-002	6.082-008 -9.875-003	6.848-008 -1.111-002	7.598-008 -1.234-002
0.10	9.758-007 -1.973-002	1.096-006 -2.216-002	1.217-006 -2.458-002	9.719-007 -1.974-002	1.092-006 -2.220-002	1.212-006 -2.468-002
0.15	4.874-006 -2.957-002	5.468-006 -3.313-002	6.061-006 -3.666-002	4.902-006 -2.959-002	5.498-006 -3.326-002	6.095-006 -3.699-002
0.20	1.512-005 -3.936-002	1.692-005 -4.396-002	1.872-005 -4.850-002	1.541-005 -3.940-002	1.724-005 -4.428-002	1.908-005 -4.928-002
0.30	7.250-005 -5.878-002	8.060-005 -6.505-002	8.876-005 -7.114-002	7.686-005 -5.892-002	8.544-005 -6.611-002	9.407-005 -7.374-002
0.40	2.119-004 -7.794-002	2.335-004 -8.512-002	2.554-004 -9.191-002	2.381-004 -7.823-002	2.622-004 -8.760-002	2.866-004 -9.801-002
0.50	4.663-004 -9.680-002	5.078-004 -1.039-001	5.505-004 -1.103-001	5.670-004 -9.730-002	6.170-004 -1.087-001	6.680-004 -1.221-001
0.60	8.447-004 -1.154-001	9.075-004 -1.213-001	9.739-004 -1.259-001	1.143-003 -1.161-001	1.225-003 -1.293-001	1.310-003 -1.459-001
0.70	1.315-003 -1.337-001	1.391-003 -1.369-001	1.477-003 -1.382-001	2.051-003 -1.346-001	2.160-003 -1.494-001	2.276-003 -1.697-001
0.80	1.784-003 -1.519-001	1.859-003 -1.509-001	1.956-003 -1.471-001	3.382-003 -1.529-001	3.486-003 -1.689-001	3.608-003 -1.933-001
0.90	2.084-003 -1.701-001	2.146-003 -1.629-001	2.255-003 -1.520-001	5.224-003 -1.710-001	5.254-003 -1.881-001	5.324-003 -2.169-001
1.00	1.949-003 -1.882-001	2.020-003 -1.728-001	2.180-003 -1.528-001	7.663-003 -1.890-001	7.495-003 -2.067-001	7.403-003 -2.406-001
1.10	1.010-003 -2.064-001	1.194-003 -1.805-001	1.535-003 -1.490-001	1.078-002 -2.070-001	1.021-002 -2.250-001	9.783-003 -2.645-001
1.20	-1.225-003 -2.246-001	-6.534-004 -1.857-001	1.686-004 -1.402-001	1.462-002 -2.251-001	1.336-002 -2.430-001	1.235-002 -2.887-001
1.30	-5.354-003 -2.426-001	-3.838-003 -1.880-001	-1.951-003 -1.260-001	1.920-002 -2.436-001	1.686-002 -2.607-001	1.494-002 -3.132-001
1.40	-1.205-002 -2.599-001	-8.595-003 -1.869-001	-4.645-003 -1.059-001	2.449-002 -2.626-001	2.056-002 -2.783-001	1.732-002 -3.380-001
1.50	-2.196-002 -2.757-001	-1.498-002 -1.816-001	-7.426-003 -7.952-002	3.031-002 -2.826-001	2.423-002 -2.958-001	1.924-002 -3.630-001
1.60	-3.552-002 -2.889-001	-2.273-002 -1.715-001	-9.422-003 -4.668-002	3.638-002 -3.036-001	2.758-002 -3.131-001	2.043-002 -3.880-001
1.70	-5.274-002 -2.979-001	-3.117-002 -1.558-001	-9.408-003 -7.726-003	4.224-002 -3.260-001	3.027-002 -3.300-001	2.073-002 -4.126-001
1.80	-7.285-002 -3.010-001	-3.914-002 -1.343-001	-6.022-003 3.626-002	4.729-002 -3.497-001	3.200-002 -3.462-001	2.014-002 -4.362-001
1.90	-9.425-002 -2.968-001	-4.522-002 -1.071-001	1.817-003 8.332-002	5.092-002 -3.743-001	3.261-002 -3.612-001	1.897-002 -4.583-001
2.00	-1.147-001 -2.849-001	-4.805-002 -7.555-002	1.438-002 1.308-001	5.268-002 -3.992-001	3.219-002 -3.743-001	1.781-002 -4.784-001
2.10	-1.317-001 -2.659-001	-4.689-002 -4.131-002	3.080-002 1.759-001	5.243-002 -4.236-001	3.109-002 -3.850-001	1.743-002 -4.966-001
2.20	-1.436-001 -2.415-001	-4.184-002 -6.438-003	4.921-002 2.165-001	5.043-002 -4.467-001	2.987-002 -3.930-001	1.853-002 -5.130-001
2.30	-1.497-001 -2.139-001	-3.382-002 2.731-002	6.730-002 2.513-001	4.724-002 -4.681-001	2.907-002 -3.983-001	2.163-002 -5.283-001
2.40	-1.502-001 -1.853-001	-2.420-002 5.881-002	8.291-002 2.802-001	4.349-002 -4.873-001	2.915-002 -4.010-001	2.689-002 -5.431-001
2.50	-1.462-001 -1.571-001	-1.441-002 8.760-002	9.449-002 3.038-001	3.977-002 -5.045-001	3.037-002 -4.015-001	3.422-002 -5.580-001
2.60	-1.390-001 -1.302-001	-5.614-003 1.137-001	1.012-001 3.227-001	3.650-002 -5.199-001	3.283-002 -4.000-001	4.338-002 -5.735-001
2.70	-1.299-001 -1.050-001	1.364-003 1.374-001	1.028-001 3.377-001	3.397-002 -5.335-001	3.652-002 -3.967-001	5.404-002 -5.899-001
2.80	-1.198-001 -8.134-002	6.031-003 1.591-001	9.934-002 3.494-001	3.231-002 -5.458-001	4.139-002 -3.918-001	6.591-002 -6.073-001
2.90	-1.096-001 -5.893-002	8.158-003 1.792-001	9.135-002 3.579-001	3.163-002 -5.568-001	4.737-002 -3.854-001	7.872-002 -6.258-001
3.00	-9.988-002 -3.736-002	7.706-003 1.979-001	7.933-002 3.635-001	3.197-002 -5.665-001	5.438-002 -3.774-001	9.225-002 -6.455-001
3.10	-9.096-002 -1.622-002	4.765-003 2.154-001	6.387-002 3.661-001	3.338-002 -5.751-001	6.241-002 -3.679-001	1.063-001 -6.664-001
3.20	-8.314-002 4.943-003	-4.896-004 2.320-001	4.557-002 3.654-001	3.596-002 -5.825-001	7.147-002 -3.567-001	1.207-001 -6.886-001
3.30	-7.658-002 2.657-002	-7.814-003 2.478-001	2.507-002 3.614-001	3.983-002 -5.886-001	8.162-002 -3.439-001	1.354-001 -7.120-001
3.40	-7.135-002 4.913-002	-1.691-002 2.627-001	2.967-003 3.537-001	4.521-002 -5.933-001	9.295-002 -3.294-001	1.501-001 -7.369-001
3.50	-6.746-002 7.310-002	-2.743-002 2.770-001	-2.614-002 3.420-001	5.239-002 -5.965-001	1.056-001 -3.132-001	1.647-001 -7.632-001
3.60	-6.483-002 9.904-002	-3.896-002 2.908-001	-4.367-002 3.261-001	6.182-002 -5.981-001	1.199-001 -2.952-001	1.790-001 -7.911-001
3.70	-6.326-002 1.276-001	-5.099-002 3.040-001	-6.705-002 3.056-001	7.412-002 -5.979-001	1.360-001 -2.755-001	1.926-001 -8.208-001
3.80	-6.241-002 1.595-001	-6.291-002 3.170-001	-8.978-002 2.802-001	9.015-002 -5.959-001	1.545-001 -2.543-001	2.052-001 -8.525-001
3.90	-6.163-002 1.958-001	-7.394-002 3.297-001	-1.114-001 2.495-001	1.111-001 -5.921-001	1.758-001 -2.318-001	2.163-001 -8.862-001
4.00	-5.990-002 2.375-001	-8.304-002 3.424-001	-1.317-001 2.130-001	1.386-001 -5.870-001	2.005-001 -2.088-001	2.251-001 -9.222-001
4.50	7.262-002 5.515-001	-3.658-002 3.835-001	-2.319-001 -7.575-002	4.569-001 -6.391-001	3.849-001 -1.480-001	1.849-001 -1.114+000
5.00	5.916-001 4.427-001	8.952-002 8.132-002	-4.564-001 -3.194-001	5.431-001 -1.320+000	3.045-001 -2.357-001	1.081-001 -1.057+000

Appendix B

NRL SHIP PROGRAM

The version of the SHIP program used to generate the data in the tables differs from the version of the SHIP program listed in NRL Report 7240* in three significant ways. The first difference is the inclusion of Subroutines CFINT, EXI, and EXI2. These subroutines calculate asymptotic expressions for the parts of the integrals truncated in Subroutines CSTM, CTSM, and CSSM, thus giving improved accuracy. However, this is a time-consuming process. To offset this increase in computer execution time, most of the trigonometric functions needed repeatedly in the program are calculated and prestored in Subroutine CALTRIG. With this addition, the program runs in about the same time as before Subroutines CFINT, EXI, and EXI2 were added, but more memory space is required. The third major change in the program is the addition of Subroutine SOLZIJ. This subroutine calculates impedance coefficients Z_i and Z_i' for ring transducers (see Eq. (8)).

A convenient feature added to the program is the inclusion of entry point FIELD in Subroutine SOLRING. For a given frequency and ring geometry it is not necessary to execute the entire program for each velocity distribution. A single call to SOLRING (or SOLZIJ) prestores on input/output unit 10 everything that is needed for any velocity distribution for a given frequency and ring geometry. For alternate velocity distributions, call FIELD to avoid recalculating these quantities.

Numerous minor changes were made in almost all subroutines; hence, the entire program is listed in this appendix. Included also is a sample output generated by the listed program corresponding to the example listed in the text. This illustrates the use of SOLZIJ and FIELD.

*P. H. Rogers, "SHIP (Simplified-Helmholtz-Integral Program), A Fast Computer Program for Calculating the Acoustic Radiation and Radiation Impedance for Free-Flooded-Ring and Finite-Circular-Cylinder Sources," NRL Report 7240, June 19, 1972.

```
      PROGRAM SHIP

      BANK(0),/6/,/STORSCST/
      COMMON/TOY/NQD1,ISYM,ICOR/PIT/JMAX,JMAXH,IMAX/BLK1/H,A,FK,PI
      COMMON/VELO/VEL/DIST/DIST/RAD/RIN,ROUT
      COMMON/MXD/JMXT,MXD/RRCC/RHOC,NPTS
      DIMENSION VEL(60),JMXT(60)
      TYPE COMPLEX VEL
C     ROUT IS THE OUTER RADIUS OF THE RING RIN THE INNER RADIUS
C     FK IS THE WAVE NUMBER
C     IMAX IS THE NUMBER OF BANDS ON THE TOP AND BOTTOM OF THE RING
C     JMAXH IS HALF THE NUMBER OF BANDS ON THE INSIDE AND OUTSIDE SURFACES
C     JMAXH AND IMAX MUST BOTH BE LESS THAN OR EQUAL TO TEN
C     NQD1 SPECIFIES GAUSSIAN QUADRATURE ORDER - NQD1 MAY BE 10, 20 OR 32
C     NQD1 = 32 UNLESS CHANGED IN SHIP
C     FOR CYLINDER SET RIN = 0. AND ROUT EQUAL TO THE RADIUS
C     H IS THE HALF HEIGHT OF THE RING
C     RHOC IS THE PRODUCT OF THE DENSITY AND THE SOUND VELOCITY OF THE MEDIUM
C     VEL(I) SPECIFIES THE (COMPLEX) VELOCITY ON THE ITH BAND
C     ISYM=+1 = SYMMETRY ABOUT Z=0, -1 = ANTISYMMETRY AND ISYM=0 = NO SYMMETRY
C     FOR Z(I,J) CALL SOLZIJ
C     FOR A FIXED FREQUENCY AND GEOMETRY CALL SOLRING FOR THE FIRST
C     VELOCITY DISTRIBUTION THEN CALL FIELD FOR ANY SUBSEQUENT VELOCITY
C     DISTRIBUTIONS.  THIS SAVES CONSIDERABLY IN TIME.
C     IF BOTH IMPEDANCE COEFFICIENTS AND RADIATION IMPEDANCE ARE DESIRED CALL
C     SOLZIJ FIRST THEN CALL FIELD REPEATEDLY
      CALL TIME
      RHOC = 1.5E6
      ISYM = 1
      JMAXH = 10 $ IMAX = 10
      FK = 10.0
      RIN = 0.09
      ROUT = 0.11
      H = 0.1
      CALL SOLZIJ
      CALL TIME
      VIN = -1.03
      VTOP = -0.3
      VOUT = 0.97
      DO 100 I = 1, 10
      VEL(I) = VIN
      VEL(I+10) = VTOP
  100 VEL(I+20) = VOUT
      CALL FIELD
      CALL TIME
C     NPTS IS THE NUMBER OF FARFIELD POINTS CALCULATED BETWEEN 0 AND 90 DEGREES
C     DIST IS THE FARFIELD DISTANCE (ICOR=1) IF ICOR=0 FIELD CALC. AT INFINITY
      ICOR = 0
      NPTS = 18
      CALL FARFLD
      CALL TIME
      END
```

```
      SUBROUTINE SOLZIJ

      COMMON/TOY/NQD1,ISYM,ICOR/RAD/RIN,ROUT/LC/LCMAX,LCMAXH/NOPR/NOPR
      COMMON/BLK1/H,A,FK,PI/PQR/PQR/VELO/VEL/AREA/AREA
      COMMON/PIT/JMAX,JMAXH,IMAX
      DIMENSION VEL(60), AREA(60), ZIJ(3,3), PQR(30), Z(3), VTEMP(60)
      TYPE COMPLEX VEL, ZIJ, PQR, Z, VTEMP
      IF(RIN.EQ.0.0) GO TO 200
      ISYMTEMP = ISYM
      JMAX = JMAXH + JMAXH
      LCMAXH = JMAX + IMAX
      LCMAX = LCMAXH + LCMAXH
      DO 299 I = 1, LCMAX
  299 VTEMP(I) = VEL(I)
      NOPR = 1
      ISYM = 1
      AREAT = (RIN + ROUT) * (H + H + ROUT - RIN)
      PRINT 700
  700 FORMAT(1H1)
      PRINT 701,RIN,ROUT,H,FK,NQD1,IMAX,JMAX
  701 FORMAT(* RIN=*F7.3*  ROUT=*F7.3*  H=*F7.3* FK=*F7.3*  NQD1=*I3
     $*  IMAX=*I3*  JMAX=*I3//)
      DO 300 I = 1, 3
      DO 300 J = 1, 3
  300 ZIJ(I,J) = 0.0
      N1 = JMAXH + 1
      N2 = JMAXH + IMAX
      N3 = N2 + 1
      DO 305 I = 1, JMAXH
  305 VEL(I) = 1.0
      DO 310 I = N1, N2
  310 VEL(I) = 0.0
      DO 306 I = N3, LCMAXH
  306 VEL(I) = 0.0
      DO 311 N = 1, 3
      IF(N.EQ.1) CALL SOLRING
      IF(N.EQ.2) 400, 401
  400 CONTINUE
      DO 350 I = 1, JMAXH
  350 VEL(I) = 0.0
      DO 351 I = N1, N2
  351 VEL(I) = 1.0
      CALL FIELD
  401 IF(N.EQ.3) 402, 403
  402 CONTINUE
      DO 352 I = N1, N2
  352 VEL(I) = 0.0
      DO 353 I = N3, LCMAXH
  353 VEL(I) = 1.0
      CALL FIELD
  403 CONTINUE
      DO 315 I = 1, JMAXH
  315 ZIJ(1,N) = ZIJ(1,N) + PQR(I) * AREA(I)
      DO 320 I = N1, N2
  320 ZIJ(2,N) = ZIJ(2,N) + PQR(I) * AREA(I)
      DO 325 I = N3, LCMAXH
```

```
325 ZIJ(3,N) = ZIJ(3,N) + PQR(I) * AREA(I)
311 CONTINUE
    DO 330 I = 1, 3
    DO 330 J = 1, 3
330 ZIJ(I,J) = ZIJ(I,J) * 2.0 * CMPLX(0.0, -FK) / AREAT
    Z(1) = ZIJ(2,3) + ZIJ(3,2)
    Z(2) = ZIJ(3,1) + ZIJ(1,3)
    Z(3) = ZIJ(1,2) + ZIJ(2,1)
    PRINT 99
 99 FORMAT(1X,*THE IMPEDANCE COEFFICIENTS FOR THIS RING TRANSDUCER IN
   $UNITS OF RHO C A ARE*,/)
    PRINT 100, ZIJ(1,1), ZIJ(2,2), ZIJ(3,3), Z(1), Z(2), Z(3)
100 FORMAT(2X,5HZ1 = ,C(E14.5,E14.5),/,2X,5HZ2 = ,C(E14.5,E14.5),/,
   $       2X,5HZ3 = ,C(E14.5,E14.5),/,1X,6HZ1P = ,C(E14.5,E14.5),/,
   $       1X,6HZ2P = ,C(E14.5,E14.5),/,1X,6HZ3P = ,C(E14.5,E14.5),/)
    NOPR = 0
    ISYM = ISYMTEMP
    DO 298 I = 1, LCMAX
298 VEL(I) = VTEMP(I)
    GO TO 210
200 PRINT 700
    PRINT 101
101 FORMAT(1X,*THIS PROGRAM DOES NOT COMPUTE IMPEDANCE COEFFICIENTS FO
   $R CYLINDER TRANSDUCERS*)
210 CONTINUE
    RETURN
    END
```

```
      SUBROUTINE SOLRING

      TYPE COMPLEX V,SUMJ,RHOC,ANS,VEL,DM,GM,VEL1,ANS1,ANS2,PQR
      DIMENSION REST(6000),ANS(60),V(30),VEL(60),GM(30,60),DM(60,60)
     1,VEL1(30),PZ(20),PLZ(20),PR(20),PLR(20),ANS1(30),ANS2(30),AREA(60)
      DIMENSION JMXT(60), PQR(30)
      COMMON/LC/LCMAX,LCMAXH/BLKA/PR,PLR,PZ,PLZ/RCC/JTOP
      COMMON/TOY/NQD1,ISYM,NQD3/PIT/JMAX,JMAXH,IMAX
      COMMON/BLK1/H,A,FK,PI/DEL/DELR,DELZ/RRCC/RRCC,NPTS
      COMMON/RAD/RIN,ROUT/MXD/JMXT,MXD/5/DM/ANS/ANS/VELO/VEL
      COMMON/6/GM,REST/TIDY/FAST/EPS/EPS/EPS1/EPS1/JOE/JTOP1
      COMMON/AREA/AREA/NOPR/NOPR/PQR/PQR
      DATA(NQD1 = 32),(PI = 3.14159265359),(EPS = 0.001),(EPS1 = 0.0001)
      DATA(JTOP1 = 10) , (JTOP = 10)
      JMAX = 2*JMAXH
      FAST = PI * NQD1 / (8.0 * FK * (ROUT + PI * H))
      IF(RIN.EQ.0.0) GO TO 200
      LCMAXH = JMAX + IMAX
      A = (RIN + ROUT) * 0.5
      GO TO 201
  200 LCMAXH = JMAXH + IMAX
      A = ROUT
  201 LCMAX = LCMAXH + LCMAXH
      CALL GQC
      CALL ERING
      RHOC = -FK * CMPLX(0.0, RRCC)
      DO 14 J=1,LCMAXH
   11 ANS1(J)= ANS2(J) = (0.0,0.0)
      DO 14 I=1,LCMAXH
      DM(I,J) = DM(I,J) + DM(I, LCMAX + 1 -J)
      GM(I,J) = GM(I,J) + GM(I, LCMAX + 1 -J)
   14 CONTINUE
      REWIND 10
      WRITE(10) DM, GM
      ENTRY FIELD
      REWIND 10
      READ(10) DM, GM
      IF(ISYM.EQ.0) GO TO 202
      DO 203 II = 1, LCMAXH
  203 VEL(LCMAX + 1 - II) = ISYM * VEL(II)
  202 CONTINUE
      IF(NOPR.EQ.1) GO TO 1111
   88 IF(RIN.NE.0.) PRINT 744
      IF(RIN.EQ.0.) PRINT 746
  746  FORMAT(1H1 60X19HCYLINDER TRANSDUCER//)
  744 FORMAT (1H1 60X15HRING TRANSDUCER//)
      PRINT 701,RIN,ROUT,H,FK,NQD1,IMAX,JMAX
  701 FORMAT(* RIN=*F7.3*  ROUT=*F7.3*  H=*F7.3* FK=*F7.3*  NQD1=*I3
     $*  IMAX=*I3*  JMAX=*I3/)
      PRINT 365
  365 FORMAT    (9X3HNUM8X7HSP REAL11X12HSP IMAGINARY9X8HVEL REAL10X13HVE
     $L IMAGINARY/)
 1111 CONTINUE
      IF(ISYM.EQ.-1) GO TO 99
      DO 7 J=1,LCMAXH
      VEL1(J) = .5*(VEL(J) + VEL(LCMAX + 1 - J) )
```

```
  7 CONTINUE
    IF(MXD.NE.1) GO TO 806
    DO 805 J=1,LCMAXH
    IF(JMXT(J).NE.0 ) GO TO 805
    DO 807 I=1,LCMAXH
    DM(I,J) = - GM(I,J)
807 GM(I,J) = (0.0,0.0)
805 CONTINUE
806 CONTINUE
    DO 246 I=1,LCMAXH
    V(I) = (0.0,0.0)
    DO 246 J=1,LCMAXH
    V(I) = V(I) + GM(I,J)*VEL1(J)
246 CONTINUE
    CALL SIMX(DM,LCMAXH,V,ANS1)
    IF(ISYM.EQ.1) GO TO 98
 99 CONTINUE
    DO 15 I=1,LCMAXH
    DO 15 J=1,LCMAXH
    DM(I,J) = DM(I,J) - DM(I,LCMAX + 1 - J) - DM(I,LCMAX + 1 -J)
 15 GM(I,J) = GM(I,J) - GM(I,LCMAX + 1 - J) - GM(I,LCMAX + 1 -J)
    DO 8 J=1,LCMAXH
    VEL1(J) = .5*(VEL(J) - VEL(LCMAX + 1 - J) )
  8 CONTINUE
    DO 248 I=1,LCMAXH
    V(I) = (0.0,0.0)
    DO 248 J=1,LCMAXH
    V(I) = V(I) + GM(I,J)*VEL1(J)
248 CONTINUE
    CALL SIMX(DM,LCMAXH,V,ANS2)
 98 DO 10 J=1,LCMAXH
    ANS(J) = ANS1(J) + ANS2(J)
 10 ANS(LCMAX + 1 - J) = ANS1(J) - ANS2(J)
    IF(MXD.NE.1) GO TO 809
    DO 808 J=1,LCMAXH
    IF(JMXT(J).NE.0 ) GO TO 808
    VEL(J) = VEL(LCMAX+1-J) = ANS(J)
    ANS(J) = ANS(LCMAX+1-J) = (0.0,0.0)
808 CONTINUE
809 CONTINUE
    SUMJ = (0.0,0.0)
    DO 537 J=1,JMAXH
    IF(RIN.EQ.0.) GO TO 600
    AREA(J) = DELZ*RIN
    AREA(JMAXH+IMAX+J) = DELZ*ROUT
    GO TO 537
600 AREA(IMAX+J) = ROUT*DELZ
537 CONTINUE
    JRING = JMAXH
    IF(RIN.EQ.0.) JRING=0
    DO 538 J=1,IMAX
    AREA(JRING+J)= PR(J)*DELR
538 CONTINUE
    DO 539 J=1,LCMAXH
539 AREA(LCMAX + 1 - J) = AREA(J)
    DO 7778 I = 1, LCMAXH
```

```
7778 PQR(I) = ANS(I)
     DO 401 J=1,LCMAX
     SUMJ= SUMJ + CONJG(VEL(J))*ANS(J)*AREA(J)
     ANS(J) = RHOC*ANS(J)
     IF(NOPR.EQ.1) GO TO 1112
     PRINT 400, J,ANS(J),VEL(J)
 400 FORMAT(1X,I10,2C(E20.8,E20.8))
1112 CONTINUE
 401 CONTINUE
     A1 = RIN+ROUT
     AREAT =A1*( H + H + ROUT - RIN)
     SUMJ = -FK*(0.0,1.0)*SUMJ/AREAT
     IF(NOPR.EQ.1) GO TO 1113
     PRINT 506, SUMJ
 506 FORMAT(/* THE COMPLEX RADIATION IMPEDANCE IN UNITS OF RHO C A IS (
    $*C(E15.8,E16.8)*)*)
1113 CONTINUE
 402 CONTINUE
     END
```

```
      SUBROUTINE ERING

      TYPE COMPLEX GM,ISM,SIM,ITM,TIM,IIM,SSM,TSM,STM,SBM,TBM,DM,RHOC,
     $ANS,VT,V,VS,VI,ISV,SIV,ITV,TIV,IIV,SSV,TSV,STV,SBV,TBV,SUMJ,TTV
      DIMENSION GM(30,60),DM(60,60),SSM(10,20),SSV(10,20),REST(6000),
     1TSM(10,20),TBM(10,10),STM(20,10),TTV(10,10),TSV(10,20),TBV(10,10),
     2 STV(20,10),ISM(10,20),ITM(20,10),SIM(10,20),TIM(10,20),IIM(10,20)
     3 ,ISV(10,20),SIV(10,20),ITV(20,10),TIV(10,20)
     4 ,IIV(10,20),PLZ(20),PR(20),PLR(20),PZ(20)
      COMMON/DEL/DELR,DELZ/BLKA/PR,PLR,PZ,PLZ/LC/LCMAX,LCMAXH
      COMMON/SSV/SSV/TSV/TSV/STV/STV/SBV/SBV/TBV/TBV/TTV/TTV
      COMMON/ISV/ISV/SIV/SIV/ITV/ITV/TIV/TIV/IIV/IIV
      COMMON/TIM/TIM/SIM/SIM/ISM/ISM/ITM/ITM/IIM/IIM
      COMMON/BLKD/TSM/UJ/TBM/PJ/STM/BLKB/SSM/VEL/VS,VI/VELT/VT
      COMMON/PIT/JMAX,JMAXH,IMAX/RAD/RIN,ROUT/5/DM/6/GM,REST
      COMMON/TIDY/FAST/RCC/JTOP/BLK1/H,A,FK,PI
      FKA = FK*A $ DELZ = H/JMAXH $ DELR = (ROUT-RIN)/IMAX
      DO 1 J=1,JMAXH
      KC = JMAX + 1 - J
      PZ(J) = H + .5*DELZ - J*DELZ
      PZ(KC) = -PZ(J)
      PLZ(1) = PZ(J)-.5*DELZ
    1 PLZ(KC)=PZ(KC) - .5*DELZ
      DO 2 I=1,IMAX
    2 PR(I) = RIN - .5*DELR + I*DELR
      CALL CALBES
      CALL CALTRIG
      CALL CTBM
      CALL STTRIG
      CALL CSTM
      CALL SSTRIG
      CALL CSSM
      CALL TSTRIG
      CALL CTSM
      DO 6000 I=1,LCMAXH
      DO 6000 J=1,LCMAXH
      GM(I,J) = (0.0,0.0)
 6000 DM(I,J) = (0.0,0.0)
      IF(RIN.EQ.0.) GO TO 80
      DO 64 I=1,IMAX
      DO 64 J= 1,IMAX
      GM(JMAXH+I,JMAXH +J) = TTV(I,J)
   64 CONTINUE
      DO 31, I=1,JMAXH
      KITE = JMAXH + 1 - I
      DO 32 J=1,JMAXH
      DM(I,J)  = IIM(KITE,JMAXH +1 - J)
      GM(I,J)  = IIV(KITE,JMAXH +1 - J)
      GM(I,LCMAX + 1 - J) = IIV(KITE,JMAXH + J)
   32 DM(I,LCMAX + 1 - J) = IIM(KITE,JMAXH + J)
      DO 33 J=1,IMAX
      GM(I,JMAXH+J) = ITV(KITE,J)
   33 DM(I,JMAXH+J) = ITM(KITE,J)
      DO 34 J=1,JMAX
      GM(I,JMAXH+IMAX+J)= ISV(KITE,J)
   34 DM(I,JMAXH+IMAX+J)= ISM(KITE,J)
```

```
      DO 35 J=1,IMAX
      GM(I,JMAXH+LCMAXH+J)= TTV(JMAX +1-KITE,IMAX+1-J)
   35 DM(I,JMAXH+LCMAXH+J)= TTM(JMAX +1-KITE,IMAX+1-J)
   31 CONTINUE
      DO 36 I=1,IMAX
      KOOT = JMAXH+I
      DM(KOOT,KOOT) = (0.5,0.0)
      DO 37 J=1,JMAXH
      KITE = JMAXH + 1 -J
      GM(KOOT,J)= TTV(I,KITE)
      DM(KOOT,J)= TTM(I,KITE)
      GM(KOOT,LCMAX +1-J)= TTV(I,JMAXH+J)
   37 DM(KOOT,LCMAX +1-J)= TTM(I,JMAXH+J)
      DO 38 J=1,JMAX
      GM(KOOT,JMAXH+IMAX+J)= TSV(I,J)
   38 DM(KOOT,JMAXH+IMAX+J)= TSM(I,J)
      DO 39 J=1,IMAX
      GM(KOOT,LCMAXH+JMAXH+J)= TBV(I,IMAX+1-J)
   39 DM(KOOT,LCMAXH+JMAXH+J)= TBM(I,IMAX+1-J)
   36 CONTINUE
      DO 40 I=1,JMAXH
      KOOT = JMAXH + IMAX + I
      DO 41 J=1,JMAXH
      KITE = JMAXH+1-J
      GM(KOOT,J) = STV(I,KITE)
      DM(KOOT,J) = STM(I,KITE)
      DM(KOOT,LCMAX+1-J)= STM(I,JMAXH+J)
      GM(KOOT,LCMAX+1-J)= STV(I,JMAXH+J)
   41 CONTINUE
      DO 42 J=1,IMAX
      DM(KOOT,JMAXH+LCMAXH+J)=STM(JMAX+1-I,IMAX+1-J)
      GM(KOOT,JMAXH+LCMAXH+J)=STV(JMAX+1-I,IMAX+1-J)
      GM(KOOT,JMAXH+J)= STV(I,J)
   42 DM(KOOT,JMAXH+J)= STM(I,J)
      DO 43 J=1,JMAX
      GM(KOOT,JMAXH+IMAX+J) = SSV(I,J)
   43 DM(KOOT,JMAXH+IMAX+J) = SSM(I,J)
   40 CONTINUE
      RETURN
   80 DO 84 I=1,IMAX
      DO 84 J= 1,IMAX
   84 GM(I,J) = TTV(I,J)
      DO 71 I=1,IMAX
      DM(I,I)= (0.5,0.0)
      DO 72 J=1,JMAX
      GM(I,IMAX+J) = TSV(I,J)
   72 DM(I,IMAX+J) = TSM(I,J)
      DO 71 J=1,IMAX
       GM(I,JMAX + IMAX + J) = TBV(I,IMAX + 1 - J)
   71  DM(I,JMAX + IMAX + J) = TBM(I,IMAX + 1 - J)
      DO 73 I=1,JMAXH
      K= IMAX + I
      DO 74 J=1,IMAX
      GM(K,J) = STV(I,J)
   74 DM(K,J) = STM(I,J)
      DO 75 J=1,JMAX
```

```
      GM(K,IMAX + J) = SSV(I,J)
   75 DM(K,IMAX + J) = SSM(I,J)
      DO 73 J=1,IMAX
      GM(K,JMAX+IMAX+J)= + STV(JMAX +1-I,IMAX + 1 -J)
   73 DM(K,JMAX+IMAX+J)= + STM(JMAX +1-I,IMAX + 1 -J)
      END
```

```
      SUBROUTINE CTBM

      COMMON/EPS1/EPS
      COMMON/5/BT0(10,10,32),BT1(11,10,32),QZ(32,10),SIGMA(32),REST(128)
      COMMON/6/GT0(10,10,32),GT1(11,10,32),RUST1(2880)
      COMMON/BLK1/H,A,FK,PI/PIT/JMAX,JMAXH,IMAX/TTV/TTV/TIDY/FAST
      COMMON/BLK2/XI,WF/TOY/NQD1,N2,N3/BLK3B/BI0,BI1/BLK3/BS0,BS1
      COMMON/BLKA/PR,PLR,PZ,PLZ/DEL/DELR,DELZ/BOLD/GS0,GS1/RCC/JTOP
      COMMON/FS/FKFK,FKFAST,TFK/TBV/TBV/UJ/TBM/GGMS/GGMS
      DIMENSION PZ(20),PLZ(20),PR(20),PLR(20),TTV(10,10),TBM(10,10),
     1 TBV(10,10),GGMS(10,32)
      TYPE COMPLEX TTV,TBM,TBV
      DIMENSION XI(32),WF(32),SUMT(10),GS0(10,32),GS1(10,32),UMT(10),
     1BUMT(10), BS0(10,32),BS1(10,32),BI0(10,32),BI1(10,32)
      COMMON/STORSCTB/TBSIN,TBCOS,TBEXP
      DIMENSION TBSIN(32),TBCOS(32),TBEXP(32,10)
      EQUIVALENCE (TBCOS(1),TBEXP(1))
      TPK = 0.25 * FKFAST
      PIOTWO = 0.5 * PI $ TWOPI = PI + PI
      N=NQD1
      HD = .5*DELR
      ARGP = H + H
      DO 7 JR=1,IMAX
      R2 = PR(JR)
      RL = R2 - HD
      RU = R2 + HD
      DO 7 IR=1,IMAX
      R1 = PR(IR)
      UMI=SUMR=SUMI=SUMRB=SUMIB=0.                                    00009400
      DO 1 L =1,N
      YAK = BT0(IR,1,L) * BT1(JR,1,L)
      VI = YAK * TBCOS(L)
      VR = YAK * TBSIN(L)
      SUMIB = SUMIB - VI
      SUMRB = SUMRB + VR
      SUMR = SUMR - VI * SIGMA(L)
      SUMI = SUMI + VR * SIGMA(L)
    1 UMI = UMI + YAK
      UMI = UMI*TFK
      R = R1
      IF(R2.LE.R1) R = R2
      IF(R.EQ.0.) R = DELR
      FACT = 2./(R*PI*ARGP)
      RM = R1
      IF(R.EQ.R1) RM = R2
      FACT1 =  PIOTWO  / ABS(ABS(R2-R1) - HD)
      EFACT1 = 1.0 - FXPF(-FACT1 * ARGP)
      UMT(1) = 0. $ SUMT(1) = -SUMR $ BUMT(1) = - SUMRB
      FL = 0.0
      ICE = 1
    2 ICE = ICE + 1
      UMMIT = SUMMIT = SUMMITB = 0.                                   00011300
      DO 375 M=1,N
      YAKR = BT0(IR,ICE,M) * BT1(JR,ICE,M)
      VAKR = YAKR - GT0(IR,ICE,M) * GT1(JR,ICE,M)
      UMMIT = UMMIT + VAKR
```

```
      ARTISTB = YAKR * TBEXP(M,ICE)
      ARTIST = ARTISTB * QZ(M,ICE)
      SUMMIT = SUMMIT + ARTIST                                          00012300
  375 SUMMITB = SUMMITB + ARTISTB
      SUMT(ICE) = SUMT(ICE-1) + SUMMIT
      BUMT(ICE) = BUMT(ICE-1) + SUMMITB
      UMT(ICE) = UMT(ICE-1) + TPK * UMMIT
      FL = FL + FKFAST
      ERFC = ABS(FACT * RM * EXPF(-ARGP * FL) * EFACTI /(FL*SUMT(ICE)))
      TESTER = ABS(1.0 - SUMT(ICE)/SUMT(ICE-1))
      IF(TESTER.LT.EPS.AND.ERFC.LT.EPS) GO TO 3
      IF(ICE.GE.JTOP) GO TO 3
      GO TO 2
    3 CONTINUE
      ANSR = SUMT(ICE)              $ ANSI = -SUMI
      VNSI = -SUMIB  $    VNSR = - BUMT(ICE)
      TBM(IR,JR) = CMPLX(ANSR,ANSI)    $ TBV(IR,JR) = CMPLX(VNSR,VNSI)
      DK = 4.*R1*RU/((R1 + RU) * (R1 + RU))
      CU = (R1+RU)*ELLIPE(DK) + (RU-R1)*ELLIPK(DK)
      DK = 4.*R1*RL/((R1 + RL) * (R1 + RL))
      CL = (R1+RL)*ELLIPE(DK) + (RL-R1)*ELLIPK(DK)
      CF = (CU - CL) / TWOPI
      ANSR = - UMT(ICE) - CF
    7 TTV(IR,JR) = CMPLX(ANSR,UMI)
      END
```

```
      SUBROUTINE CSTM

      COMMON/ICE/ICE,NOEXI
      TYPE COMPLEX STV,ITV,STM,ITM
      COMMON/EPS/EPS/JOE/JTOP
      COMMON/STV/STV/ITV/ITV/PJ/STM/ITM/ITM
      COMMON/RAD/RIN,ROUT
      DIMENSION ITM(20,10),ITV(20,10),STM(20,10),STV(20,10)
      COMMON/BLKA/PR,PLR,PZ,PLZ/PIT/JMAX,JMAXH,IMAX
      DIMENSION PZ(20),PLZ(20),PR(20),PLR(20),GGMS(10,32)
      DIMENSION BS0(10,32),BS1(10,32),BI0(10,32),BI1(10,32)
      DIMENSION XI(32),WF(32),SUMV(10)
      DIMENSION GS0(10,32),GS1(10,32),BUMT(10),SUMT(10),BUMV(10)
      TYPE COMPLEX ANS,ANSB,VNS,VNSB
      COMMON/FS/FKFK,FKFAST,TFK/GGMS/GGMS
      COMMON/DEL/DELR,DELZ/BOLD/GS0,GS1/BLK1/H,A,FK,PI/BLK2/XI,WF
      COMMON/5/BT0(10,10,32),BT1(1),10,32),QZ(32,10),SIGMA(32),REST(128)
      COMMON/TOY/N,NN,NNN/BLK3B/BI0,BI1/BLK3/BS0,BS1/TIDY/FAST
      COMMON/6/GT0(10,10,32),STEXP(32,20,10)
      COMMON/STORSCST/STSIN(32,21),STCOS(32,21)
      PIOTWO = 0.5 * PI
      R1 = A
      HD = .5*DELR
      DO 1000 JR=1,IMAX
      R2 = PR(JR)
      RL = R2 - HD
      RU = R2 + HD
      DO 1000 IR=1,JMAX
      ARGP = H - PZ(IR)
      SUMR=SUMI=SUMRB=SUMIB = VUMR=VUMI=VUMRB=VUMIB= 0.
      DO 1 L =1,N                                                    00009400
      BU = BT1(JR,1,L)
      VAK = BS0(1,L) * BU
      VAKB = BI0(1,L) * BU
      YAK = VAK * SIGMA(L)
      YAKB = VAKB * SIGMA(L)
      SUMR = SUMR - YAK * STCOS(L,IR)
      SUMI = SUMI + YAK * STSIN(L,IR)
      VUMR = VUMR - VAK * STSIN(L,IR)
      VUMI = VUMI + VAK * STCOS(L,IR)
      SUMRB = SUMRB - YAKB * STCOS(L,IR)
      SUMIB = SUMIB + YAKB * STSIN(L,IR)
      VUMRB = VUMRB - VAKB * STSIN(L,IR)
      VUMIB = VUMIB + VAKB * STCOS(L,IR)
    1 CONTINUE
      R = R1
      IF(R2.LE.R1) R = R2
      IF(R.EQ.0.) R = DELR
      FACT = 2./(R*PI*ARGP)
      RM = R1
      IF(R.EQ.R1) RM = R2
      FACT1 = PIOTWO / AMIN1(ROUT - R2, R2 - RIN)
      EFACT1 = 1.0 - EXPF(-ARGP * FACT1)
      SUMT(1) = - SUMR
      BUMT(1) = - SUMRB
      SUMV(1) =   VUMR  $  BUMV(1) =   VUMRB
```

```
      FL = 0.0
      ICE = 1
    2 ICE = ICE + 1
      VUMMIT = VUMMITB = 0.
      SUMMIT = SUMMITB = 0.
      DO 375 M=1,N                                                    00011300
      BU = STEXP(M,IR,ICE) * BT1(JR,ICE,M)
      VAKR = BS0(ICE,M) * BU
      VAKRB = BI0(ICE,M) * BU
      SUMMIT = SUMMIT + VAKR * QZ(M,ICE)
      SUMMITB = SUMMITB + VAKRB * QZ(M,ICE)
      VUMMIT = VUMMIT + VAKR
      VUMMITB = VUMMITB + VAKRB
  375 CONTINUE
      BUMV(ICE) = BUMV(ICE - 1) + VUMMITB
      SUMV(ICE) = SUMV(ICE - 1) + VUMMIT
      SUMT(ICE) = SUMT(ICE - 1) + SUMMIT
      BUMT(ICE) = BUMT(ICE - 1) + SUMMITB
      FL = FL + FKFAST
      FLT = FL + FACT1
      ERFC = ABS(FACT * RM * EFACT1 * EXPF(-ARGP * FL) / (FL*SUMT(ICE)))
      IF(ERFC.LT.EPS) GO TO 3
      IF(ICE.GE.JTOP) GO TO 3
      GO TO 2
    3 CONTINUE
      ANSI =-SUMI
      ANSR = SUMT(ICE)
      ANSIB = - SUMIB   $  ANSRB = BUMT(ICE)
      NOEXT = 0
      CALL CFINT(ARGP, RU, ROUT, FL, CFU)
      CFST = RU * CFU
      NOEXT = 1
      CALL CFONE(ARGP, RU, ROUT, FL, CFU)
      CFSTV = RU * CFU
      NOEXT = 0
      CALL CFINT(ARGP, RL, ROUT, FL, CFL)
      CFST = CFST - (RL * CFL)
      NOEXT = 1
      CALL CFONE(ARGP, RL, ROUT, FL, CFL)
      CFSTV = CFSTV - (RL * CFL)
      NOEXT = 0
      CALL CFINT(ARGP, RU, RIN, FL, CFU)
      CFIT = RU * CFU
      NOEXT = 1
      CALL CFONE(ARGP, RU, RIN, FL, CFU)
      CFITV = RU * CFU
      NOEXT = 0
      CALL CFINT(ARGP, RL, RIN, FL, CFL)
      CFIT = CFIT - (RL * CFL)
      NOEXT = 1
      CALL CFONE(ARGP, RL, RIN, FL, CFL)
      CFITV = CFITV - (RL * CFL)
      ANSR = ANSR+CFST  $ ANSRB = ANSRB + CFIT
      STM(IR,JR) = CMPLX(ANSR,ANSI)
      ITM(IR,JR) = CMPLX(ANSRB,ANSIB)
      SUMV(ICE) = SUMV(ICE) + CFSTV
```

```
      SUMV(ICF) = SUMV(ICF) + CFITV
      VNS = CMPLX(-SUMV(ICF),VUMI) $ VNSB = CMPLX(-SUMV(ICF),VUMIB)
      STV(IR,JR) = VNS  $ ITV(IR,JR) = VNSB
 1000 CONTINUE
      END
```

```
      SUBROUTINE CSSM

      COMMON/ICF/ICF,NOEXT
      DIMENSION SIV(10,20),IIV(10,20),SSV(10,20),ISV(10,20)
      DIMENSION SIM(10,20),IIM(10,20),SSM(10,20),ISM(10,20)
      TYPE COMPLEX SSV,SIV,ISV,IIV,SSM,SIM,ISM,IIM
      DIMENSION PZ(20),PLZ(20),PR(20),PLR(20)
      TYPE REAL IIIV,IIRV,ISIV,ISRV,ISR,IIR,IIT,IST,III,IIR,ISI,ISR
      DIMENSION SSR(10),IIR(10),SIR(10),ISR(10)
      DIMENSION GS0(10,32),GS1(10,32),XI(32),WF(32),SUMT(10)
      DIMENSION BS0(10,32),BS1(10,32)
      DIMENSION BI0(10,32),BI1(10,32),GI0(10,32),GI1(10,32)
      TYPE COMPLEX SS,II,YAKC,UMII,UMSS,UMIS
      DIMENSION SST(10),IIT(10),SIT(10),IST(10) ,GGMS(10,32)
      DIMENSION BUMT(10),DUMT(10),EXPFI(32)
      COMMON/EPS/EPS
      COMMON/RAD/RIN,ROUT/TOY/NQD1,NQD2,NQD3/JOE/JTOP/BOLD/GS0,GS1
      COMMON/PIT/JMAX,JMAXH,IMAX/BLKA/PR,PLR,PZ,PLZ
      COMMON/SSV/SSV/IIV/IIV/SIV/SIV/ISV/ISV/GGMS/GGMS
      COMMON/BLKB/SSM/SIM/SIM/IIM/IIM/ISM/ISM/FS/FKFK,FKFAST,TFK
      COMMON/BLK1/H,A,FK,PI/BLK2/XI,WF/BLK3/BS0,BS1/TIDY/FAST
      COMMON/BBOLD/GI0,GI1/BLK3B/BI0,BI1/DEL/DELR,DELZ
      COMMON/5/BT0(10,10,32),BT1(11,10,32),QZ(32,10),SIGMA(32),REST(128)
      COMMON/6/GT0(10,10,32),SSEXP(32,20,10)
      COMMON/STORSCST/SSSIN(32,21),SSCOS(32,21)
      N = NQD1
      ARGP = .5*DELZ
      ZERO = 0.0
      TPK = .25*FKFAST
      Z0 = H- .5*DELZ
      SSI=SSR=III=IIR=SII=SIR=ISI=ISR=0.
      UMII = UMIS = UMSS = (0.0,0.0)
      DO 1 L =1,N                                                    00009400
      SIGMAP = ARGP*SIGMA(L)
      EXPFI(L) = EXPF(-QZ(L,1)*ARGP)
      TRIGFR  = 2.*COS(SIGMAP) - 2.
      TRIGFI = 2.*SIN(SIGMAP)
      YAK = TFK*WF(L)/SIGMA(L)
      YAKR =-YAK*TRIGFR
      YAKI = YAK*TRIGFI
      YAKC = CMPLX(YAKR,-YAKI)
      SSI = SSI + BS0(1,L)*BS1(1,L)*YAKI
      SSR = SSR + BS0(1,L)*BS1(1,L)*YAKR
      IIR = IIR - BI0(1,L)*BI1(1,L)*YAKR
      III = III - BI0(1,L)*BI1(1,L)*YAKI
      SII = SII - BS0(1,L)*BI1(1,L)*YAKI
      SIR = SIR - BS0(1,L)*BI1(1,L)*YAKR
      ISI = ISI + BI0(1,L)*BS1(1,L)*YAKI
      ISR = ISR + BI0(1,L)*BS1(1,L)*YAKR
       UMII =  UMII + YAKC*BI0(1,L)*BI0(1,L)
       UMIS =  UMI     YAKC*BI0(1,L)*BS0(1,L)
       UMSS =  UMSS + YAKC*BS0(1,L)*BS0(1,L)
    1 CONTINUE                                                       00010900
      SUMT(1) = REAL(UMSS) $ BUMT(1) = REAL(UMII) $ DUMT(1) = REAL(UMIS)
      SST(1) = SSR $ IIT(1)= IIR $ SIT(1)  = SIR $ IST(1)= ISR
      EXFACT = EXPF(-FKFAST*ARGP)
```

```
      DO 501 ICE = 2, 10
      SUMSS=SUMII=SUMSI = SUMIS = 0.
      SUMMIT = SUMMITB = SUMMITD = 0.
      DO 375 M=1,N                                                    00011300
      EXPF1(M) = EXPF1(M)*EXFACT
      EXPF2 = 2.*(EXPF1(M) - 1.)
      YAK = -TPK*WF(M)
      YAKR = -EXPF2*YAK
      YAKRG = YAKR / QZ(M,ICE)
      YAK = YAK + YAK
      SUMSS = SUMSS + BS0(ICE,M) * BS1(ICE,M) * YAKRG
      SUMSS = SUMSS - GS0(ICE,M)*GS1(ICE,M)*YAKR
      SUMII = SUMII - BI0(ICE,M) * BI1(ICE,M) * YAKRG
      SUMII = SUMII + GI0(ICE,M)*GI1(ICE,M)*YAKR
      SUMSI = SUMSI - BS0(ICE,M) * BI1(ICE,M) * YAKRG
      SUMSI = SUMSI + GS0(ICE,M)*GI1(ICE,M)*YAK
      SUMIS = SUMIS + BI0(ICE,M) * BS1(ICE,M) * YAKRG
      SUMIS = SUMIS - GI0(ICE,M)*GS1(ICE,M)*YAK
      BSBS = BS0(ICE,M)*BS0(ICE,M)
      BIBS = BI0(ICE,M)*BS0(ICE,M)
      BIBI = BI0(ICE,M)*BI0(ICE,M)
      SUMMIT = SUMMIT + BSBS * YAKRG
      SUMMITB = SUMMITB + BIBI * YAKRG
      SUMMITD = SUMMITD + BIBS * YAKRG
  375 CONTINUE                                                        00012400
      SST(ICE) = SST(ICE-1) + SUMSS
      IIT(ICE) = IIT(ICE-1) + SUMII
      SIT(ICE) = SIT(ICE-1) + SUMSI
      IST(ICE) = IST(ICE -1) + SUMIS
      SUMT(ICE) = SUMT(ICE - 1)  +  SUMMIT
      BUMT(ICE) = BUMT(ICE - 1) + SUMMITB
  501 DUMT(ICE) = DUMT(ICE-1) + SUMMITD
      AA = 4.*ROUT*ROUT
      P = ARGP                                                        00013300
      PP = P*P                                                        00013400
      DK = AA/(PP + AA)
      SDK = SQRT(DK)                                                  00013600
      CF2 = -P*SDK*ELLIPK(DK)/(PI*AA)
      SSR= ROUT*(SST(JTOP) + CF2 + CF2)
      AA = RIN*RIN*4.
      DK = AA/(PP + AA)                                               00013500
      SDK = SQRT(DK)
      CF2 = -P*SDK*ELLIPK(DK)/(PI*AA)                                 00013700
      IIR=  RIN*(IIT(JTOP) - CF2 - CF2)
      SSI = ROUT*SSI $ III= RIN*III $ SII= RIN*SII $ ISI=ROUT*ISI
      ICE = 10
       FL = (ICE-1)*FKFAST
      NOEXT = 0
      CALL CFINT(ARGP,ROUT,RIN,FL,CFIS)
      CALL CFINT(ARGP,RIN,ROUT,FL,CFP)        $        CFSI= -CFP
      SIT(ICE) = SIT(ICE) + CFSI + CFSI
      IST(ICE) = IST(ICE) + CFIS + CFIS
      SIR = RIN*SIT(ICE) $ ISR = ROUT*IST(ICE)
      ISR = ISR - 1.0
      JM = 9
      FLAM = FKFAST*JM
```

```
      CALL CF7ERO(ARGP,ROUT,ROUT,FLAM,CP)
      CALL CFZERO(ZERO,ROUT,ROUT,FLAM,CM)
      CF1 = 2*(CP-CM)
      CALL CF7ERO(ARGP,RIN,RIN,FLAM,CP)
      CALL CF7ERO(ZERO,RIN,RIN,FLAM,CM)
      CF2 = 2*(CP-CM)
      CALL CF7ERO(ARGP,ROUT,RIN,FLAM,CP)
      CALL CF7ERO(ZERO,ROUT,RIN,FLAM,CM)
      CF3 = -2*(CP-CM)
      ANSR = SUMT(ICE) + CF1
      ANSRR = BUMT(ICE) + CF2
            ANSRD = DUMT(ICE) - CF3
      QI =-AIMAG( UMII)
      IIV(1,1) = RIN*CMPLX(ANSRR,QI)
      QI =-AIMAG( UMIS)
      ISV(1,1) = ROUT*CMPLX(ANSRD,QI)
      SIV(1,1) = RIN*CMPLX(ANSRD,QI)
      QI =-AIMAG( UMSS)
      SSV(1,1) = ROUT*CMPLX(ANSR,QI)
      IIM(1,1) =-CMPLX(IIR,III) + (0.5,0.0)
      SSM(1,1) = -CMPLX(SSR,SSI)  + (0.5,0.0)
      SIM(1,1) = - CMPLX(SIR,SII)
      ISM(1,1) = -CMPLX(ISR,ISI)
      DO 66 J=2,JMAX
      Z = PLZ(J)
      ARGP = Z0 - Z - DELZ
      ARGM = Z0 - Z
      SSI=SSR=III=IIR=SII=SIR=ISI=ISR=0.
      SSIV=SSRV=IIIV=IIRV=SIIV=SIRV=ISIV=ISRV= 0.
      DO 61 L=1,N
      YAKR = -SSCOS(L,J-1)
      YAKI = SSSIN(L,J-1)
      ISR = ISR + BI0(1,L)*BS1(1,L)*YAKR
      ISI = ISI + BI0(1,L)*BS1(1,L)*YAKI
      SIR = SIR - BS0(1,L)*BI1(1,L)*YAKR
      SII = SII - BS0(1,L)*BI1(1,L)*YAKI
      III = III - BI0(1,L)*BI1(1,L)*YAKI
      IIR = IIR - BI0(1,L)*BI1(1,L)*YAKR
      SSR = SSR + BS0(1,L)*BS1(1,L)*YAKR
      SSI = SSI + BS0(1,L)*BS1(1,L)*YAKI
      IIIV = IIIV + BI0(1,L) * BI0(1,L) * YAKI
      IIRV = IIRV + BI0(1,L) * BI0(1,L) * YAKR
      ISRV = ISRV + BI0(1,L) * BS0(1,L) * YAKR
      ISIV = ISIV + BI0(1,L) * BS0(1,L) * YAKI
      SSRV = SSRV + BS0(1,L) * BS0(1,L) * YAKR
   61 SSIV = SSIV + BS0(1,L) * BS0(1,L) * YAKI
      SIIV = ISIV $ SIRV = ISRV
      FACT1 = PI * 0.5 / (ROUT - RIN)
      FACT = 2./(A*PI*ARGM)
      SST(1) = SSR $ IIT(1)= IIR $ SIT(1)  = SIR $ IST(1)= ISR
      SSB(1)= SSRV $ IIB(1)=  IIRV $ SIB(1) = SIRV $ ISB(1) = ISRV
      ICE = 1
    2 ICE = ICE  + 1
      SUMSS=SUMII=SUMSI = SUMIS = 0.
      VUMSS = VUMII=VUMSI=VUMIS  = 0.
      DO 376 M=1,N
```

```
      VAKR = SSFXP(M,J-1,ICF)
      VUMSS = VUMSS + BS0(ICF,M)*BS0(ICE,M)*VAKR
      VUMIS = VUMIS + BI0(ICF,M)*BS0(ICE,M)*VAKR
      VUMII = VUMII + BI0(ICF,M)*BI0(ICE,M)*VAKR
      SUMSI = SUMSI - BS0(ICF,M) * BI1(ICF,M) * VAKR
      SUMIS = SUMIS + BI0(ICF,M) * BS1(ICF,M) * VAKR
      SUMSS = SUMSS + BS0(ICF,M) * BS1(ICE,M) * VAKR
  376 SUMII = SUMII - BI0(ICF,M) * BI1(ICF,M) * VAKR
      VUMSI = VUMIS
      SST(ICF) = SST(ICF-1) + SUMSS
      IIT(ICF) = IIT(ICF-1) + SUMII
      IST(ICF) = IST(ICE -1) + SUMIS
      SIT(ICF) = SIT(ICE-1) + SUMSI
      SSB(ICE) = SSB(ICE-1) + VUMSS
      IIB(ICF) = IIB(ICE-1) + VUMII
      ISB(ICE) = ISB(ICF -1) + VUMIS
      SIB(ICE) = SIB(ICE-1) + VUMSI
      FL = (ICE - 1)*FKFAST
      FLT = FL + FACTI
      ERFC = (FACT/FL)*(EXPF(-ARGP*FL) - EXPF(- ARGP*FLT))
      ERFC = ERFC/SIT(ICE)
      ERFC = ABS(ERFC)
      IF(ERFC.LE.EPS) GO TO 3
      IF(ICE.GE.10) GO TO 3
      GO TO 2
    3 SSI = ROUT*SSI $ III= RIN*III $ SII= RIN*SII $ ISI=ROUT*ISI
      NOEXT = 0
      CALL CFINT(ARGM, RIN, ROUT, FL, CFM)
      CALL CFINT(ARGP, RIN, ROUT, FL, CFP)
      SIT(ICF) = SIT(ICE) - (CFP - CFM)
      CALL CFINT(ARGP, RIN, RIN, FL, CFP)
      NOEXT = 1
      CALL CFZERO(ARGP, RIN, RIN, FL, CP)
      NOEXT = 0
      CALL CFINT(ARGM, RIN, RIN, FL, CFM)
      NOEXT = 1
      CALL CFZERO(ARGM, RIN, RIN, FL, CM)
      IIT(ICE) = IIT(ICE) - (CFP - CFM)
      IIB(ICF) = IIB(ICE) + (CP - CM)
      NOEXT = 0
      CALL CFINT(ARGP, ROUT, ROUT, FL, CFP)
      NOEXT = 1
      CALL CFZERO(ARGP, ROUT, ROUT, FL, CP)
      NOEXT = 0
      CALL CFINT(ARGM, ROUT, ROUT, FL, CFM)
      NOEXT = 1
      CALL CFZERO(ARGM, ROUT, ROUT, FL, CM)
      SST(ICE) = SST(ICF) + (CFP - CFM)
      SSB(ICE) = SSB(ICE) + (CP - CM)
      NOEXT = 0
      CALL CFINT(ARGP, ROUT, RIN, FL, CFP)
      NOEXT = 1
      CALL CFZERO(ARGP, ROUT, RIN, FL, CP)
      NOEXT = 0
      CALL CFINT(ARGM, ROUT, RIN, FL, CFM)
      NOEXT = 1
```

```
      CALL CFZERO(ARGM, ROUT, RIN, FL, CM)
      IST(ICE) = IST(ICE) + (CFP - CFM)
      ISB(ICE) = ISB(ICE) + (CP - CM)
      SIB(ICE) = SIB(ICE) + (CP - CM)
      SSR = ROUT*SST(ICE) $ IIR = RIN*IIT(ICE)
      SIR = RIN*SIT(ICE) $ ISR = ROUT*IST(ICE)
      SSIV = ROUT*SSIV $ IIIV = RIN*IIIV $ SIIV = RIN*SIIV
      ISIV = ROUT*ISIV
      SIRV = RIN*SIB(ICE) $ ISRV = ROUT*ISB(ICE)
      SSRV = ROUT*SSB(ICE) $ IIRV= RIN*IIB(ICE)
      SS = CMPLX(SSR,SSI) $ II = CMPLX(IIR,III)
      SSM(1,J)=SS
      ISM(1,J)=           CMPLX(ISR,ISI)
      SIM(1,J)=            CMPLX(SIR,SII)
      IIM(1,J)=II
      SSV(1,J)=          -CMPLX(SSRV,SSIV)
      IIV(1,J)=          -CMPLX(IIRV,IIIV)
      ISV(1,J)=          -CMPLX(ISRV,ISIV)
      SIV(1,J)=          -CMPLX(SIRV,SIIV)
      IF(J.GT.JMAXH) GO TO 66
      SSM(J,1)=SSM(1,J) $ SSV(J,1)=SSV(1,J) $ ISM(J,1)=ISM(1,J)
      SIM(J,1)=SIM(1,J) $ ISV(J,1)=ISV(1,J) $ IIM(J,1)=IIM(1,J)
      IIV(J,1)=IIV(1,J) $ SIV(J,1)=SIV(1,J)
   66 CONTINUE
      DO 12 J=1,JMAX
      JILT = JMAX-J+1
      DO 11 M=2,JILT
      IF(M.GT.JMAXH) GO TO 601
      SSM(M,M+J-1) = SSM(1,J)
      SSV(M,M+J-1) = SSV(1,J)
      ISM(M,M+J-1) = ISM(1,J)
      ISV(M,M+J-1) = ISV(1,J)
      IIM(M,M+J-1) = IIM(1,J)
      IIV(M,M+J-1) = IIV(1,J)
      SIM(M,M+J-1) = SIM(1,J)
      SIV(M,M+J-1) = SIV(1,J)
  601 CONTINUE
      IF(M+J-1.GT.JMAXH) GO TO 11
      SSM(M+J-1,M) = SSM(1,J)
      SSV(M+J-1,M) = SSV(1,J)
      ISM(M+J-1,M) = ISM(1,J)
      ISV(M+J-1,M) = ISV(1,J)
      IIM(M+J-1,M) = IIM(1,J)
      IIV(M+J-1,M) = IIV(1,J)
      SIM(M+J-1,M) = SIM(1,J)
      SIV(M+J-1,M) = SIV(1,J)
   11 CONTINUE
   12 CONTINUE
      END
```

```
      SUBROUTINE CTSM

      COMMON/ICE/ICE,NOEXT
      TYPE COMPLEX TIV,TSV,TIM,TSM,ANS,ANSB,VNS,VNSB
      DIMENSION TSM(10,20),TIM(10,20),TSV(10,20),TIV(10,20)
      DIMENSION PZ(20),PLZ(20),PR(20),PLR(20)
      COMMON/EPS/EPS/JOE/JTOP
      COMMON/BLK1/H,A,FK,PI/RAD/RIN,ROUT/PIT/JMAX,JMAXH,IMAX/IJK/I,J
      COMMON/TIM/TIM/BLKD/TSM/TIV/TIV/TSV/TSV/BLKA/PR,PLR,PZ,PLZ
      DIMENSION BS0(10,32),BS1(10,32),EX(32)
      DIMENSION BI0(10,32),BI1(10,32),GI0(10,32),GI1(10,32)
      DIMENSION   SUMTV(10),BUMTV(10),XI(32),WF(32),SUMT(10),BUMT(10)
      DIMENSION GS0(10,32),GS1(10,32),GGMS(10,32)
      COMMON/5/BT0(10,10,32),BT1(11,10,32),QZ(32,10),SIGMA(32),REST(128)
      COMMON/6/GT0(10,10,32),TSEXP(32,20,10)
      COMMON/BBOLD/BI0,GI1/DEL/DELR,DELZ/BOLD/GS0,GS1
      COMMON/BLK3/BS0,BS1/TIDY/FAST/FS/FKFK,FKFAST,TFK
      COMMON/BLK3B/BI0,BI1/TOY/N,NN,NNN/BLK2/XI,WF/GGMS/GGMS
      COMMON/STORSCST/TSSIN(32,21),TSCOS(32,21)
      TPK = 0.25 * FKFAST
      PIOTWO = 0.5 * PI
      EPS1 = 0.0001
      DO 20 I=1,IMAX
      R = PR(I)
      IR = I
      DO 20 J= 1,JMAX
      Z = PLZ(J)
      ARGP = H  - Z - DEL7
      IF(J .EQ. 1) ARGP = 0.0
      ARGM = H  - Z
      SUMR=SUMI=SUMRB=SUMIB=SUMRV=SUMIV=SUMRBV=SUMIBV=0.                    00009400
      DO 1 L =1,N
      TRIGFR = TSCOS(L,J) * BT0(IR,1,L)
      TRIGFI = TSSIN(L,J) * BT0(IR,1,L)
      SUMR = SUMR - TRIGFR * BS1(1,L)
      SUMI = SUMI + TRIGFI * BS1(1,L)
      SUMRB = SUMRB + TRIGFR * BI1(1,L)
      SUMIB = SUMIB - TRIGFI * BI1(1,L)
      SUMRV = SUMRV - TRIGFR * BS0(1,L)
      SUMIV = SUMIV - TRIGFI * BS0(1,L)
      SUMRBV = SUMRBV - TRIGFR * BI0(1,L)
      SUMIBV = SUMIBV - TRIGFI * BI0(1,L)
    1 CONTINUE
      SUMT(1) = SUMR $ BUMT(1) = SUMRB
      SUMTV(1) = SUMRV  $ BUMTV(1)  = SUMRBV
      IF(J.EQ.1) GO TO 54321
      FACT = 2./(R*PI*ARGP)
54321 CONTINUE
      FACT1 = PIOTWO / AMIN1(ROUT - R, R - RIN)
      EFACT1 = 1.0 - EXPF(-ARGP * FACT1)
      ANSTR = RIN*SUMRB
      ANST = ROUT*SUMR
      FL = 0.0
      ICE = 1
    2 ICE = ICE + 1
      SUMMTT=SUMMTTR=VUMMTT=VUMMTTR=0.
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      DO 375 M=1,N                                                          00011300
      GMR = BT0(IR,ICE,M) * TSFXP(M,J,ICE)
      ARTIST = BS1(ICE,M) * GMR
      ARTISTB = BI1(ICE,M) * GMR
      ARTISTV = GMR*BS0(ICE,M)
      VRTISTB = GMR*BI0(ICE,M)
      VUMMIT = VUMMIT + ARTISTV
      VUMMITB = VUMMITB + VRTISTB
      IF(J.EQ.1) GO TO 93
      GO TO 94
   93 GS = GT0(IR,ICE,M)*WF(M) *TPK
      GSGS = GS*GS1(ICE,M)
      GSGSI = GS*GI1(ICE,M)
      ARTIST = ARTIST - GSGS $ ARTISTB = ARTISTB - GSGSI
   94 SUMMIT = SUMMIT + ARTIST
      SUMMITB= SUMMITB - ARTISTB
  375 CONTINUE                                                              00012400
      BUMT(ICE) = BUMT(ICE-1) + SUMMITB
      SUMT(ICE) = SUMT(ICE-1) + SUMMIT
      SUMTV(ICE) = SUMTV(ICE-1) + VUMMIT
      BUMTV(ICE) = BUMTV(ICE-1) + VUMMITB
      FL = FL + FKFAST
      IF(J.EQ.1) GO TO 95
      FLT = FL + FACT1
      ERFC = ABS(FACT * EXPF(-ARGP * FL) * EFACT1 / (FL * SUMT(ICE)))
      IF(ERFC.LT.EPS) GO TO 8
      IF(ICE.GE.JTOP) GO TO 8
      GO TO 2
   95 ANSR = ROUT*SUMT(ICE) + .50
      ANSRB = RIN*BUMT(ICE)
      TESTER = ABS(1.0 - ANST / ANSR)
      TESTERB = ABS(1.0 - ANSTB / ANSRB)
      IF(ICE.GE.JTOP) GO TO 100
      IF(TESTER.LT.EPS1.+ND.TESTERB.LT.EPS1) GO TO 100
      ANST = ANSR
      ANSTB = ANSRB
      GO TO 2
  100 CONTINUE
      NOEXT = 0
      CALL CFINT(ARGM, ROUT, PR(IR), FL, CFM)
      SUMT(ICE) = SUMT(ICE) - CFM
      NOEXT = 1
      CALL CFZERO(ARGM, ROUT, PR(IR), FL, CFM)
      NOEXT = 0
      CALL CFZERO(ARGP, ROUT, PR(IR), FL, CFP)
      SUMTV(ICE) = SUMTV(ICE) + CFP - CFM
      CALL CFINT(ARGM, RIN, PR(IR), FL, CFM)
      BUMT(ICE) = BUMT(ICE) + CFM
      NOEXT = 1
      CALL CFZERO(ARGM, RIN, PR(IR), FL, CFM)
      NOEXT = 0
      CALL CFZERO(ARGP, RIN, PR(IR), FL, CFP)
      BUMTV(ICE) = BUMTV(ICE) + CFP - CFM
      GO TO 3
    8 NOEXT = 0
      CALL CFINT(ARGP, ROUT, PR(IR), FL, CFP)
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      SUMT(ICE) = SUMT(ICF) + CFP
      NOEXT = 1
      CALL CFZERO(ARGP, ROUT, PR(IR), FL, CFP)
      SUMTV(ICE) = SUMTV(ICE) + CFP
      NOEXT = 0
      CALL CFINT(ARGM, ROUT, PR(IR), FL, CFM)
      SUMT(ICE) = SUMT(ICF) - CFM
      NOEXT = 1
      CALL CFZERO(ARGM, ROUT, PR(IR), FL, CFM)
      SUMTV(ICE) = SUMTV(ICF) - CFM
      NOEXT = 0
      CALL CFINT(ARGP, RIN, PR(IR), FL, CFP)
      BUMT(ICF) = BUMT(ICE) - CFP
      NOEXT = 1
      CALL CFZERO(ARGP, RIN, PR(IR), FL, CFP)
      BUMTV(ICE) = BUMTV(ICF) + CFP
      NOEXT = 0
      CALL CFINT(ARGM, RIN, PR(IR), FL, CFM)
      BUMT(ICE) = BUMT(ICE) + CFM
      NOEXT = 1
      CALL CFZERO(ARGM, RIN, PR(IR), FL, CFM)
      BUMTV(ICF) = BUMTV(ICE) - CFM
    3 CONTINUE
      ANS = CMPLX(SUMT(ICF),SUMI)
      ANSB = CMPLX(BUMT(ICE),SUMIB)
      VNS =CMPLX(-SUMTV(ICE),SUMIV)
      VNSB =CMPLX(-BUMTV(ICE),SUMIBV)
      TSM(I,J) = ANS*ROUT   $ TIM(I,J) = RIN*ANSB
      TSV(I,J) = VNS*ROUT   $ TIV(I,J) = RIN*VNSB
      IF(J.EQ.1) TSM(I,J) = TSM(I,J) + 0.500
   20 CONTINUE
      END
```

```
      SUBROUTINE CALTRIG

      COMMON/BLK2/XI,WF/BLK1/H,R,FK,PI/STORSCTD/TBSIN,TBCOS,TBEXP
      COMMON/TOY/NOD1,ISYM,ICOR/TIDY/FAST
      DIMENSION TBSIN(32),TBCOS(32),TBEXP(32,10),XI(32),WF(32)
      EQUIVALENCE (TBCOS(1),TBEXP(1))
      COMMON/FS/FKFK,FKFAST,TFK
      COMMON/PIT/JMAX,JMAXH,IMAX/DEL/DELR,DELZ
      COMMON/STORSCST/STSIN(32,21),STCOS(32,21)
      DIMENSION STEMP(32),CTEMP(32),ETEMP(32,10)
      COMMON/5/BT0(10,10,32),BT1(11,10,32),QZ(32,10),SIGMA(32),REST(128)
      COMMON/6/GT0(10,10,32),STEXP(32,20,10)
      EQUIVALENCE(STSIN(1),TSSIN(1)), (STCOS(1),TSCOS(1))
      EQUIVALENCE (STEXP(1),TSEXP(1))
      DIMENSION TSSIN(32,21),TSCOS(32,21),TSEXP(32,20,10)
      FKFK = FK * FK $ TFK = 0.25 * FK $ FKFAST = 2.0 * FAST * FK
      TPK = 0.25 * FKFAST
      RTPKSQ = 1.0 / (TPK * TPK)
      N = NOD1
      A = H + H
      DO 300 L = 1, N
      B = A * SIGMA(L)
      TBSIN(L) = SIN(B) * TFK
      TBCOS(L) = COS(B) * TFK
  300 CONTINUE
      A = -4.0 * FAST * H
      B = FK * A
      TBMULT = EXP(B)
      DO 301 M = 1, N
      B = A * SIGMA(M)
      TBEXP(M,2) = EXP(B) * TPK
      DO 302 ICE = 3, 10
      TBEXP(M,ICE) = TBEXP(M,ICE-1) * TBMULT
  302 CONTINUE
  301 CONTINUE
      RETURN
      ENTRY STTRIG
      HZ = 0.5 * DELZ
      DO 350 L = 1, N
      A = HZ * SIGMA(L)
      STSIN(L,1) = SIN(A)
      STCOS(L,1) = COS(A)
      PROD = STSIN(L,1) * STCOS(L,1)
      STEMP(L) = PROD + PROD
      PROD = STCOS(L,1) * STCOS(L,1)
      CTEMP(L) = PROD + PROD - 1.0
      STSIN(L,1) = STSIN(L,1) * TFK
      STCOS(L,1) = STCOS(L,1) * TFK
      DO 351 IR = 2, JMAX
      STSIN(L,IR) = STSIN(L,IR-1) * CTEMP(L) + STCOS(L,IR-1) * STEMP(L)
      STCOS(L,IR) = STCOS(L,IR-1) * CTEMP(L) - STSIN(L,IR-1) * STEMP(L)
  351 CONTINUE
  350 CONTINUE
      HZ = -HZ
      STMULT = EXP(HZ * FKFAST)
      DO 352 M = 1, N
```

```
      STEXP(M,1,1) = EXP(HZ * QZ(M,1)) * TPK
      DO 353 ICE = 2, 10
      STEXP(M,1,ICE) = STEXP(M,1,ICE-1) * STMULT
      ETEMP(M,ICE) = STEXP(M,1,ICE) * STEXP(M,1,ICE) * RTPKSQ
      DO 354 IR = 2, JMAX
      STEXP(M,IR,ICE) = STEXP(M,IR-1,ICE) * ETEMP(M,ICE)
  354 CONTINUE
  353 CONTINUE
  352 CONTINUE
      RETURN
      ENTRY SSTRIG
      DO 370 L = 1, N
      DO 371 J = 2, JMAX
      STSIN(L,J-1) = (STSIN(L,J-1)-STSIN(L,J)) * WF(L) / SIGMA(L)
      STCOS(L,J-1) = (STCOS(L,J-1)-STCOS(L,J)) * WF(L) / SIGMA(L)
      DO 372 ICE = 2, 10
      STEXP(L,J-1,ICE) = (STEXP(L,J-1,ICE)-STEXP(L,J,ICE)) * WF(L) /
     % QZ(L,ICE)
  372 CONTINUE
  371 CONTINUE
  370 CONTINUE
      RETURN
      ENTRY TSTRIG
      JMAXP = JMAX + 1
      DO 400 L = 1, N
      TSSIN(L,1) = 0.0
      TSCOS(L,1) = TPK * WF(L) / SIGMA(L)
      DO 401 J = 2, JMAXP
      TSSIN(L,J) = TSSIN(L,J-1) * CTEMP(L) + TSCOS(L,J-1) * STEMP(L)
      TSCOS(L,J) = TSCOS(L,J-1) * CTEMP(L) - TSSIN(L,J-1) * STEMP(L)
      TSSIN(L,J-1) = TSSIN(L,J-1) - TSSIN(L,J)
      TSCOS(L,J-1) = TSCOS(L,J-1) - TSCOS(L,J)
  401 CONTINUE
  400 CONTINUE
      DO 402 M = 1, N
      DO 403 ICE = 2, 10
      TSEXP(M,1,ICE) = WF(M) * (1.0 - ETEMP(M,ICE)) * TPK / QZ(M,ICE)
      DO 404 J = 2, JMAX
      TSEXP(M,J,ICE) = TSEXP(M,J-1,ICE) * ETEMP(M,ICE)
  404 CONTINUE
  403 CONTINUE
  402 CONTINUE
      RETURN
      END
```

```
      SUBROUTINE CALBES

      DIMENSION P7(20),PL7(20),PR(20),PLR(20),XI(32),WF(32)
      DIMENSION BI0(10,32),BI1(10,32),GI0(10,32),GI1(10,32)
      DIMENSION GS0(10,32),GS1(10,32),BS0(10,32),BS1(10,32)
      COMMON/BLKA/PR,PLR,PZ,PLZ/PIT/JMAX,JMAXH,IMAX/RCC/JTOP
      COMMON/5/BT0(10,10,32),BT1(11,10,32),QZ(32,10),SIGMA(32),REST(128)
      COMMON/6/GT0(10,10,32),GT1(11,10,32),RUST1(2880)
      COMMON/TOY/NQD1,NQD2,NQD3/BOLD/GS0,GS1/BLK1/H,A,FK,PI/BLK2/XI,WF
      COMMON/BLK3B/BI0,BI1/BBOLD/GI0,GI1/TIDY/FAST/BLK3/BS0,BS1
      COMMON/RAD/RIN,ROUT/GGMS/GGMS
      DIMENSION GGMS(10,32)
      N=NQD1
      FKFK = FK*FK                                                    00015100
      FKFAST = 2.*FAST*FK
      DO 9 L=1,N
      SIGMA(L) = XI(L) + 0.5 * FK
      QZ(L,1) = FAST * (XI(L) + XI(L) - FK)
      QQ = SIGMA(L) * SIGMA(L)
      D = SQRT(FKFK - QQ)                                             00015700
      GGMS(1,L) = D
      T=D*ROUT $ TI = D*RIN
      CALL BESL(T,BSJ0,BSJ1,Y0,YU)                                    00016000
      CALL BESL(TI,BIJ0,BIJ1,Y0,YU)
      BI0(1,L) = BIJ0 $ BI1(1,L) = BIJ1 * D
      BS0(1,L) = BSJ0                                                 00016400
      BS1(1,L) = BSJ1 * D
      BT1(1,1,L) = BIJ1 * RIN * WF(L) / D
      BT1(IMAX + 1,1,L) = BSJ1 * ROUT * WF(L) / D
    9 CONTINUE
      DO15 ICE=2,JTOP
      DO16 M=1,N
      QZ(M,ICE) = QZ(M, ICE - 1) + FKFAST
      RHO = QZ(M,ICE)
      QQR = RHO*RHO                                                   00017100
      GMS = SQRT(QQR + FKFK)                                          00017200
      GGMS(ICE,M) = GMS
      TM = GMS*ROUT $ SM = RHO*ROUT
      TIM = GMS*RIN $ SIM = RHO*RIN
      CALL BESL(SM,GST0,GST1,Y1,Y2)                                   00017700
      CALL BESL(TM,BST0,BST1,YZ,YJ)                                   00017800
      CALL BESL(SIM,GIT0,GIT1,YI,Y0)
      CALL BESL(TIM,BIT0,BIT1,YK,Y0)
      BI0(ICE,M) = BIT0 $ BI1(ICE,M) = BIT1 * GMS $ GI0(ICE,M) = GIT0
      GI1(ICE,M) = GIT1
      BS0(ICE,M) = BST0                                               00018300
      BS1(ICE,M) = BST1 * GMS
      GS0(ICE,M) = GST0                                               00018500
      GS1(ICE,M) = GST1                                               00018600
      BT1(1,ICE,M) = RIN * BIT1 * WF(M) / GMS
      BT1(IMAX + 1,ICE,M) = ROUT * BST1 * WF(M) / GMS
      GT1(1,ICE,M) = RIN * GIT1 * WF(M) / RHO
      GT1(IMAX + 1,ICE,M) = ROUT * GST1 * WF(M) / RHO
   16 CONTINUE
   15 CONTINUE
      DDELR = (ROUT - RIN)/IMAX
```

```
      DELR = .5*DDELR
      RL = RIN - DDELR
      DO 5 IMP=1,IMAX
      RL = RL + DDELR
      DO 1 L=1,N
      D = GGMS(1,L)
      T= D*PR(IMP)
      T1= D*(PR(IMP) - DELR)
      CALL BES0(T,BT0(IMP,1,L))
      IF(IMP.EQ.1) GO TO 1
      CALL BES1(T1,BT1(IMP,1,L))
      BT1(IMP,1,L) = BT1(IMP,1,L) * RL * WF(L) / D
    1 CONTINUE                                                          00016600
      DO 5 ICE=2,JTOP                                                   00016700
      DO 6 M=1,N
      RHO = Q7(M,ICE)
      GMS = GGMS(ICE,M)
      SM = RHO*PR(IMP) $  SM1 = RHO*(PR(IMP) - DELR)
      TM = GMS*PR(IMP) $ TM1 = GMS*(PR(IMP) - DELR)
      CALL BES0(TM,BT0(IMP,ICE,M))
      CALL BES0(SM,GT0(IMP,ICE,M))
      IF(IMP.EQ.1) GO TO 6
      CALL BES1(TM1,BT1(IMP,ICE,M))
      BT1(IMP,ICE,M) = BT1(IMP,ICE,M) * RL * WF(M) / GMS
      CALL BES1(SM1,GT1(IMP,ICE,M))
      GT1(IMP,ICE,M) = GT1(IMP,ICE,M) * RL * WF(M) / RHO
    6 CONTINUE                                                          00018700
    5 CONTINUE                                                          00018800
      DO 20 ICE = 1, JTOP
      DO 21 M = 1, N
      DO 22 IMP = 1, IMAX
      BT1(IMP,ICE,M) = BT1(IMP+1,ICE,M) - BT1(IMP,ICE,M)
      IF(ICE .EQ. 1) GO TO 22
      GT1(IMP,ICE,M) = GT1(IMP+1,ICE,M) - GT1(IMP,ICE,M)
   22 CONTINUE
   21 CONTINUE
   20 CONTINUE
      RETURN                                                            00018900
      END
```

```
      SUBROUTINE CFINT(A,B,C,X,ANS)

      COMPLEX  ARG1, ARG3, F1, F3
      COMMON/ICE/ICE,NOEXT/JOE/JTOP1/SAVE/ISAVE,EXMZR,EXMZI
      DIMENSION A1RG(2), A3RG(2), FF1(2), FF3(2), SAVER(2)
      EQUIVALENCE (ARG1,A1RG), (ARG3,A3RG), (F1,FF1), (F3,FF3)
      DATA (PII = 0.15915494309)
      IF(ICE .LT. JTOP1) GO TO 400
      FACT = 1.
      IFLAG = 0
      NFLAG = 0
      GO TO 1
      ENTRY CFONE
      IF(ICE .LT. JTOP1) GO TO 400
      FACT = 1. / X
      IFLAG = 1
      NFLAG = 0
      GO TO 1
      ENTRY CFZERO
      IF(ICE .LT. JTOP1) GO TO 400
      FACT = 1. / X
      IFLAG = 1
      NFLAG = 1
    1 CONTINUE
      FM = PII / SQRT(B * C)
      A1RG(1) = A * X
      A1RG(2) = - (B - C) * X
      A3RG(1) = A1RG(1)
      A3RG(2) = - (B + C) * X
      IF(IFLAG .EQ. 1) GO TO 2
      CALL EXI(ARG1,F1)
      NSAVE = ISAVE $ SAVER(1) = EXMZR $ SAVER(2) = EXMZI
      CALL EXI(ARG3,F3)
      GO TO 3
    2 CALL EXI2(ARG3, F3)
      ISAVE = NSAVE $ EXMZR = SAVER(1) $ EXMZI = SAVER(2)
      CALL EXI2(ARG1, F1)
    3 CONTINUE
      IF(NFLAG .EQ. 0) ANS = FM * (FF1(2) + FF3(1))
      IF(NFLAG .EQ. 1) ANS = FM * (FF1(1) + FF3(2))
      ANS = ANS * FACT
      RETURN
  400 ANS = 0.0
      RETURN
      END
```

```
      SUBROUTINE EXI(Z,ANS)

      COMPLEX Z, ANS
      COMPLEX ZZ, AANS
      DIMENSION B(2), SUM(2)
      EQUIVALENCE (ZZ,B), (AANS,SUM)
      COMMON/SAVE/ISAVE,EXMZR,EXMZI
      DIMENSION FACT(40)
      DATA (ISTORE = 0), (PIOTWO = 1.5707963268)
      IF(ISTORE .EQ. 1) GO TO 410
      DO 320 N = 1, 40
      FACT(N) = - FLOAT(N - 1) / FLOAT(N * N)
  320 CONTINUE
      ISTORE = 1
  410 CONTINUE
      K = 1
      GAMMA = 0.5772156649
      ZZ = Z
      B1B1 = B(1) * B(1)
      B2B2 = B(2) * B(2)
      U = B1B1 + B2B2
      IF(U.GT.100.0) GO TO 400
      ISAVE = 0
      IF(B1B1 .GT. B2B2) SU = B(1) + 0.5 * B2B2 / B(1)
      IF(B1B1 .LE. B2B2) SU = ABS( B(2) + 0.5 * B1B1 / B(2) )
      EN = 6.0 + 3.5 * SU
      NN = EN
      IF(NN .GT. 40) NN = 40
      SUM(1) = -B(1) $ SUM(2) = -B(2)
      TERMR = -B(1) $ TERMI = -B(2)
      DO 300 N = 2, NN
      X = (TERMR*B(1) - TERMI*B(2)) * FACT(N)
      Y = (TERMR*B(2) + TERMI*B(1)) * FACT(N)
      TERMR = X
      TERMI = Y
      SUM(1) = SUM(1) + TERMR
      SUM(2) = SUM(2) + TERMI
  300 CONTINUE
      ELNRZ = 0.5 * ALOG(U)
      IF(B(1) .NE. 0.0) ELNIZ = ATAN(B(2) / B(1))
      IF(B(1) .EQ. 0.0) ELNIZ = SIGN(PIOTWO, B(2))
      SUM(1) = -GAMMA - ELNRZ - SUM(1)
      SUM(2) = -ELNIZ - SUM(2)
      ANS = AANS
      RETURN
  400 CONTINUE
      ISAVE = 1
      ONEOU = 1.0 / U
      SUM(1) = 1.0 $ SUM(2) = 0.0
      TERMR = 1.0 $ TERMI = 0.0
      EEMMEE = 0.0
      DO 310 N = 1, 4
      EEMMEE = EEMMEE + 1.0
      FFF = EEMMEE * ONEOU
      X = - FFF * (TERMR*B(1) + TERMI*B(2))
      Y = FFF * (TERMR*B(2) - TERMI*B(1))
```

```
      TERMR = X
      TERMI = Y
      SUM(1) = SUM(1) +TERMR
      SUM(2) = SUM(2) + TERMI
  310 CONTINUE
      E = EXP(-B(1))
      X = E * COS(B(2))
      Y = -E * SIN(B(2))
      EXMZR = X
      EXMZI = Y
      FACTR = (X * B(1) + Y * B(2)) * ONEOU
      FACTI = (Y * B(1) - X * B(2)) * ONEOU
      X = FACTR * SUM(1) - FACTI * SUM(2)
      Y = FACTR * SUM(2) + FACTI * SUM(1)
      SUM(1) = X
      SUM(2) = Y
      ANS = AANS
      RETURN
      END
```

```
      SUBROUTINE EXI2(Z,ANS)

      COMMON/SAVE/ISAVE,EXMZR,EXMZI/ICF/ICE,NOEXI
      COMPLEX Z,ANS
      COMPLEX ZZ, AANS
      DIMENSION B(2) , A(2)
      EQUIVALENCE (ZZ,B), (AANS,A)
      AANS = ANS
      ZZ = Z
      K = 1
      TEST1 = REAL(ZZ)
      TEST2 = AIMAG(ZZ)
      IF(TEST1 .EQ. 0.0 .AND. TEST2 .EQ. 0.0) GO TO 1
      IF(NOEXI .EQ. 0) CALL EXI(ZZ, AANS)
      X = A(1)*B(1) - A(2)*B(2)
      Y = A(1)*B(2) + A(2)*B(1)
      IF(ISAVE .EQ. 1) GO TO 400
      E = EXP(-B(1))
      EXMZR = E * COS(B(2))
      EXMZI = -E * SIN(B(2))
400   CONTINUE
      A(1) = EXMZR - X
      A(2) = EXMZI - Y
      ANS = AANS
      RETURN
    1 A(1) = 1.0
      A(2) = 0.0
      ANS = AANS
      RETURN
      END
```

```
      SUBROUTINE GQC
C
      TYPE DOUBLE W,X                                                    00000200
      COMMON/BLK1/H,A,FK,PI/TOY/NQD1,LL,MM/BLK2/XI,WF
      DIMENSION XI(32),WF(32),W(31),X(31)
      DATA (PI = 3.14159265359)                                          00000500
      DATA(X = 0.14887433898163ID000, 0.433395394129247D000,
     * 0.67940956829902AD000,0.865063366688985D000,
     *0.973906528517172D000,
     *       0.07652652113349733375SD000,0.22778585114164507808ODOOO,
     * 0.37370608871541956067JD000,0.5108670019508270980040000,
     * 0.63605368072651502545JD000,0.7463319064601507926140000,
     * 0.8391169718222188233950000, 0.9122344282513259058680000,
     * 0.96397192727791379126800001,0.9931285991850949247860000,
     *       0.997263861849481563540000, 0.9856115115452683354OD000,
     *0.96476225558750643077D000, 0.934906075937739689170000,           00000700
     * 0.89632115576605212396D000, 0.849367613732569970130000,           00000800
     * 0.79448379596794240696D000, 0.732182118740289680380000,           00000900
     * 0.66304426693021520097D000, 0.587715757240762329040000,           00001000
     * 0.50689990893222939002D000, 0.421351276130635345360000,           00001100
     *0.331868602282127649770000, 0.23928736225213707454D000,           00001200
     * 0.14447196158279649348D000, 0.48307665687738316234D-001)          00001300
      DATA(W= 0.29552422471475JD000, 0.269266719309996D000,
     *0.21908636251598ZD000, 0.1494513491505810000,
     *0.06667134430868800000,
     *       0.15275338713072585069800000,0.14917298647260374678800000,
     * 0.14209610931838205132900000,0.13168863844917662698D000,
     * 0.11819453196151841731ZD000, 0.10193011981724043503700000,
     * 0.08327674157670474872500000,0.06267204833410906357000000,
     *0.04060142980038694133ID000, 0.017614007139152118312D000,
     *       0.7018610009470096600400-002, 0.16274394730905670605D-001, 00001400
     * 0.25392065309262059455D-001, 0.34273862913021433102D-001,         00001500
     * 0.42835898022226680656D-001, 0.50998059262376176296D-001,         00001600
     *0.58684093478535547145D-001, 0.65822222776361846837D-001,         00001700
     * 0.72345794108848506225D-001, 0.78193895787070306471D-001,         00001800
     * 0.83311924226946755222D-001, 0.87652093004403811142D-001,         00001900
     * 0.91173878695763884712D-001, 0.93844399080804565639D-001,         00002000
     * 0.95638720079274859419D-001, 0.96540088514727800566D-001)         00002100
      PFK = 0.5 * FK
      NNL = NQD1/2   $ NBL = 0
      IF(NQD1.EQ.20) NBL = 5
      IF(NQD1.EQ.32) NBL = 15
      DO 111 I=1,NNL                                                     00002400
      K = I + NBL
      XI(I) = X(K) * PFK
      WF(I) = W(K)
      XI(I + NNL) = - X(K) * PFK
  111 WF(I + NNL)= W(K)
      RETURN
      ENTRY TIME
      TIMER = TIMELEFT(K)
      PRINT 1, TIMER
    1 FORMAT(* TIME LEFT *F10.3* SECONDS*//)
      RETURN
      END
```

```
      SUBROUTINE FARFLD
      DIMENSION PTOP(10),PINS(20),POUT(20),ANS(60)
      COMMON/LC/LCMAX,LCMAXH/DIST/DIST/RAD/RIN,ROUT/ANS/ANS
      COMMON/BLK1/H,A,FK,PI/DEL/DELR,DELZ/BLKA/PR,PLR,PZ,PLZ
      COMMON/PIT/JMAX,JMAXH,IMAX/VELO/VEL/RRCC/RRCC,NPTS
      COMMON/TOY/NQD1,ISYM,ICOR
      TYPE COMPLEX FFI,FFT,FFTB,RHOC,ADDIT1,SUM1,FFVT,FFVS,BJI,BJOUT,CEP
     1,CEM,PTOP,PINS,POUT,ANS,I,SUM,ADDIT,ARGI,VEL,PBOT,VINS,VOUT,VTOP,
     2 VBOT
      DIMENSION VEL(60),PBOT(10),VINS(20),VOUT(20),VTOP(10),VBOT(10)
      DIMENSION PZ(20),PLZ(20),PR(20),PLR(20)
      DATA(ALICE= 8.685889638)
      PRINT 700
  700 FORMAT(1H1)
      IF (ICOR.EQ.0) GO TO 41
      PRINT 40,DIST
   40 FORMAT (//15X17HPATTERN AT DIST = E12.4//20X5HANGLE17X2HDB
     $ 15X9HMAGNITUDE/)
      GO TO 42
   41 PRINT 43
   43 FORMAT (/13X28HFARFIELD PATTERN AT INFINITY/20X5HANGLE17X2HDB
     $ 15X9HMAGNITUDE/)
   42 I = (0.,1.) $ RHOC = RRCC*I
      DD = 1./(2.*NPTS) $ DELTH = DD*PI $ DELTHD = 180.*DD
      NPT = NPTS-1    $ JMAXT = JMAXH
      IF(RIN.EQ.0.)        JMAXH = 0
      DO 2 J=1,IMAX
      PBOT(J) = ANS(LCMAX - JMAXH + 1 - J)
      VBOT(J) = VEL(LCMAX - JMAXH + 1 - J)
      VTOP(J) = VEL(JMAXH + J)
    2 PTOP(J) = ANS(JMAXH+J)
      DO 3 J=1,JMAXT
      POUT(J)= ANS(IMAX+JMAXH+J)
      VOUT(J)= VEL(IMAX+JMAXH+J)
      VOUT(JMAX +1-J) = VEL( LCMAX +1 -JMAXH-IMAX - J)
    3 POUT(JMAX +1-J) = ANS( LCMAX +1 -JMAXH-IMAX - J)
      JMAXH = JMAXT
      IF(RIN.EQ.0.) GO TO 966
      DO 965 J=1,JMAXH
      PINS(J) = ANS(JMAXH+1-J)
      VINS(J) = VEL(JMAXH+1-J)
      VINS(JMAX+1 - J) = VEL(LCMAX -JMAXH + J)
  965 PINS(JMAX+1 - J) = ANS(LCMAX -JMAXH + J)
      GO TO 970
  966 DO 969 J=1,JMAX
      VINS(J) = (0.0,0.0)
  969 PINS(J) = (0.0,0.0)
  970 FFI= .5*FK*DELZ
      RO = FK*ROUT $ RI = FK*RIN
      CALL BESL(RO,BSO,BJO,Y0,Y1) $ CALL BESL(RI,BSI,BJ1,Y1,Y0)
      BO = BSO*ROUT    $  BI = BSI*RIN
      BJI = RIN*BJ1 $ BJOUT = ROUT*BJO
      IF(ICOR.EQ.0) GO TO 202
      BSI = RIN*RIN*BSI/DIST $ BSO = ROUT*ROUT*BSO/DIST
      GO TO 203
  202 BSI=BSO=0.
```

```
203 BJOUT = BJOUT + I*BSO $ BJI = BJI + I*BSI
    SUM = (0.0,0.0)
    DO 37 K=1,JMAX
    ADDIT = (BJOUT*POUT(K) - BJI*PINS(K))
    ADDIT1= RHOC*(VINS(K)*BI + VOUT(K)*BO)
    ADDIT = ADDIT - ADDIT1
 37 SUM = SUM + ADDIT
    FFI = FFI*SUM          $ FFVT = (0.0,0.0)
    DO 38 K=1,IMAX
    RL = PR(K) - .5*DELR    $   RU = RL + DELR
    TU = FK*RU  $  TL = FK*RL
    CALL BES1(TU,BU) $  CALL BES1(TL,BL)
 38 FFVT = FFVT -           (VTOP(K) + VBOT(K))*(RU*BU - RL*BL)
    FF0 = CABS(FFI + FFVT*.5*RHOC)
902 DEG = 0.0 $ FFOM = 0.0
    PRINT 33, DEG, FFOM, FF0
    DO 1 J=1,NPTS
    THETA = J*DELTH
    IF(J.EQ.NPTS) THETA = 8999.*PI/18000.
    COSTH = COS(THETA) $ SINTH = SIN(THETA)
    ARGI = -I*FK*SINTH
    TT = RI*COSTH
    CALL BESL(TT,BS1,BJ1,Y0,Y1)
    BI = RIN*BS1
    TT = RO*COSTH
    CALL BESL(TT,BS2,BJ2,Y0,Y1)
    BJI= RIN*BJ1    $ BJOUT = ROUT*BJ2  $ BO = ROUT*BS2
    IF(ICOR.EQ.0)      GO TO 205
    BS1 = RIN*RIN*BS1/DIST  $  BSO = ROUT*ROUT*BS2/DIST
    BJOUT = BJOUT*COSTH + I*BSO
    BJI = BJI*COSTH + I*BSI
    GO TO 207
205 BJOUT = BJOUT*COSTH
    BJI = BJI*COSTH
207 FFI = .5*I*(CEXP(ARGI*DELZ) - 1.)/SINTH
    SUM = (0.0,0.0)
    DO 4 K=1,JMAX
    CEM = CEXP(ARGI*PLZ(K))
    ADDIT = (BJOUT*POUT(K) - BJI*PINS(K))*CEM
    ADDIT1 = (VOUT(K)*BO + VINS(K)*BI)*RHOC*CEM
  4 SUM = SUM + ADDIT -ADDIT1
    FFI= FFI*SUM
    SUM = (0.0,0.0)
    FFTB = .5/COSTH
    ARGI = I*FK*H*SINTH
    CEM = CEXP(-ARGI)
    CEP = CONJG(CEM)
    DO 5 K=1,IMAX
    RU = PR(K) + .5*DELR  $ RL = PR(K) - .5*DELR
    TT = FK*RU*COSTH    $ TTL = FK*RL*COSTH
    CALL BES1(TT,BU) $ CALL BES1(TTL,BL)
    RUBL = RU*BU - RL*BL
    ADDIT = -I*SINTH*(PBOT(K)*CEP - PTOP(K)*CEM)
    ADDIT1 = RHOC*(VTOP(K)*CEM + VBOT(K)*CEP    )
  5 SUM = SUM + (ADDIT - ADDIT1)*RUBL
    FFTB = SUM*FFTB
```

```
      FFM = CABS(FFI + FFTB)
      DEG = J*DELTHD
      FFPRSURE = FFM
      FFM = ALICE*LOGF(FFM/FF0)
      PRINT 33, DEG,FFM, FFPRSURE
   33 FORMAT(5X,F20.3,F20.3,E25.6,/)
    1 CONTINUE
      IF(DEG.GE.0..AND.ISYM.NE.1) GO TO 900
      GO TO 901
  900 DELTH = -DELTH $ DELTHD = -DELTHD
      GO TO 902
  901 CONTINUE
      END
```

```
      SUBROUTINE SIMX( MAT,MCT,RHS,ANS)

      DIMENSION OHOLD(60),MAT(60,60),RHS(30),ANS(MCT)
      TYPE COMPLEX CC,CC2,OHOLD,RHS
      DIMENSION C(2),CX(2),CX2(2)
      TYPE COMPLEX MAT,ORIG,ANS,B0,B2,B4,B6,B8,B10,B11,B13,B15                  020
      TYPE INTEGER V
      EQUIVALENCE  (B2,C),(CC,CX),(CC2,CX2)
      DO 101 I=1,MCT
      DO 101 J=1,MCT
  101 MAT(I,MCT,J) = MAT(I,J)
      DO 100 J=1,MCT
      OHOLD(J) =  MAT(J,MCT+1)
  100  MAT(J,MCT + 1) = - RHS(J)
   10 FORMAT(1X,6(E17.10,F17.10))                                           040
   15 FORMAT(25H  THIS MATRIX IS SINGULAR/)                                 050
   28 FORMAT(1H1)                                                           091
      NCT=MCT+1
      JSING=JFIN=MCT                                                        100
      IX=0$ B4=(0.0,0.0)$ B11=(1.0,0.0)                                     120
      JCT=MCT-1                                                             159
      DO 3 J=1,JCT                                                          160
      KK=J+1                                                                170
      GOTO 25                                                               180
   24 DO 4 K=KK,MCT                                                         190
      B8=MAT(K,J)/MAT(J,J)                                                  200
      DO 5 L=J,NCT                                                          210
      B10=B8*MAT(J,L)                                                       220
    5 MAT(K,L)=MAT(K,L)-B10                                                 230
    4 CONTINUE                                                              240
    3 B11=B11*MAT(J,J)                                                      250
      B11=B11*MAT(MCT,MCT)                                                  00000255
      LOW=-MCT$ MO=-1$                                                      260
      DO 6 INM=LOW,MO                                                       261
      M=IABS(INM)                                                           262
      B0=-MAT(M,NCT)                                                        270
      B2=MAT(M,M)                                                           280
      B4=(0.0,0.0)                                                          290
      IF(IX) 7,22,7                                                         300
   22 IX=IX+1                                                               310
      GOTO 8                                                                320
    7 MO2=-JFIN                                                             330
      DO 9 INN=LOW,MO2                                                      331
      N=IABS(INN)                                                           332
    9 B4=B4+MAT(M,N)*ANS(N)                                                 340
      B0=B0-B4$ JFIN=JFIN-1                                                 350
    8 IF( C(1).EQ.0..AND.C(2).EQ.0.)  13,29                                 360
   29 ANS(M)=B0/B2                                                          361
    6 CONTINUE                                                              370
      GO TO 27
   25 V=J
      CC=MAT(J,J)                                                           410
      IF( CX(1).EQ.0. .AND.CX(2).EQ.0.) 11,12                               415
   11 IF(V.EQ.JSING)13,14                                                   420
   13 PRINT28$ PRINT15                                                      430
      RETURN                                                                440
                                                                            450
```

```
 14 V=V+1                                                              460
    CC2=MAT(V,J)                                                       465
    IF(CX2(1).EQ.0..AND.CX2(2).EQ.0.) 11,16                            470
 16 DO 17 JJ=J,NCT                                                     480
    B6=MAT(J,JJ)                                                       490
    MAT(J,JJ)=MAT(V,JJ)                                                500
 17 MAT(V,JJ)=B6                                                       510
    B11=-B11                                                           520
 12 JSING=JSING-1                                                      530
    GOTO 24                                                            540
 27 DO 200 J=1,MCT
200  MAT(J,MCT+1) = OHOLD(J)
    DO 102 I=1,MCT
    DO 102 J=1,MCT
102 MAT(I,J) = MAT(I+MCT,J)
    END
```

```
      SUBROUTINE BFS1(X,BJ1)

      IF(X.GT.3.)GO TO 1
      XT = (X*X)/9.
      BJ1= X*(.5 +XT*(-.56249985 + XT*(.21093573 + XT*(-.03954289 +
     1 XT*(.00443319 + XT*(-.00031761 + XT*.00001109))))))
      RETURN
    1 XT = 3./X
      F1 =  .79788456 +XT*(.00000156 + XT*(.01659667 + XT*(.00017105 +
     1  XT*(- .00249511 + XT*(.00113653 - .00020033*XT)))))
      T1= X - 2.35619449 + XT*(.12499612 + XT*(.00005650 +XT*(-.00637879
     1    + XT*(.00074348 + XT*(.00079824 -.00029166*XT)))))
      SX = SQRT(X)
      SX = 1./SX
      BJ1 = SX*F1*COS(T1)
      RETURN
      ENTRY BFS0
      IF(X.GT.3.) GO TO 5
      XT = (X*X)/9.
      BJ1=(1. + XT*(-2.2499997 + XT*(1.2656208 + XT*( -.3163866 +
     1 XT*(.0444479 + XT*(- .0039444 + XT*.0002100))))))
      RETURN
    5 XT = 3./X
      F0 = .79788456 +XT*(-.00000077 + XT*(-.00552740 + XT*(-.00009512
     1 + XT*(.00137237 + XT*(-.00072805 + XT*.00014476)))))
      T0 = X-.78539816 + XT*(-.04166397 + XT*(-.00003954 + XT*(.00262573
     1  + XT*(-.00054125 + XT*(-.00029333 + .00013558*XT)))))
      SX = SQRT(X)
      SX = 1./SX
      BJ1 = SX*F0*COS(T0)
      RETURN
      END
```

```
      SUBROUTINE BESL(X,BJ0,BJ1,Y0,Y1)

      IF(X.GT.3.)GO TO 1
      XT = (X*X)/9.
      BJ0=(1. + XT*(-2.2499997 + XT*(1.2656208 + XT*( -.3163866 +
     1 XT*(.0444479 + XT*(- .0039444 + XT*.0002100))))))
      BJ1= X*(.5 +XT*(-.56249985 + XT*(.21093573 + XT*(-.03954289 +
     1 XT*(.00443319 + XT*(-.00031761 + XT*.00001109))))))
      RETURN
    1 XT = 3./X
      F0 = .79788456 +XT*(-.00000077 + XT*(-.00552740 + XT*(-.00009512
     1 + XT*(.00137237 + XT*(-.00072805 + XT*.00014476)))))
      F1 =  .79788456 +XT*(.00000156 + XT*(.01659667 + XT*(.00017105 +
     1  XT*(- .00249511 + XT*(.00113653 - .00020033*XT)))))
      T0 = X-.78539816 + XT*(-.04166397 + XT*(-.00003954 + XT*(.00262573
     1  + XT*(-.00054125 + XT*(-.00029333 + .00013558*XT)))))
      T1= X - 2.35619449 + XT*(.12499612 + XT*(.00005650 +XT*(-.00637879
     1   + XT*(.00074348 + XT*(.00079824 -.00029166*XT)))))
      SX = SQRT(X)
      SX = 1./SX
      BJ0 = SX*F0*COS(T0)
      BJ1 = SX*F1*COS(T1)
      RETURN
      END
```

```
      FUNCTION FN(X)

      DIMENSION AK(4),BK(4),AE(4),BE(4),A(4),B(4)
      DIMENSION FA(4),FB(4),GA(4),GB(4)
      DATA (FA=38.027264,265.187033,335.677320,38.102495)
      DATA (FB=40.021433,322.624911,570.236280,157.105423)
      DATA (GA = 42.242855,302.757865,352.018498,21.821899)
      DATA (GB=48.196927,482.485984,1114.978885,449.690326)
      DATA(F2=-.250000000),(F4=0.010416667),(F6=-.000231481)
      DATA(F8=0.000003100),(F10=-.000000028),(F3=-.055555556)
      DATA(F5=0.001666667),(F7=-.000028345),(F9=0.000000306),(F11=
     1-.000000002)
      DATA (AK= 0.09666344259,0.03590092383,0.03742563713,0.01451196212)
      DATA(BK=0.12498593597,0.06880248576,0.03328355346,0.00441787012)
      DATA(AE=0.44325141463,0.06260601220,0.04757383546,0.01736506451)
      DATA(BE=0.24998368310,0.09200180037,0.04069967526,0.00526449639)
         ENTRY CI
      IFLAG = 1
      IF(X.LT.1.) GO TO 1
   27 XX=X*X
      FDEN = FB(4) + XX*(FB(3) + XX*(FB(2) + XX*(FB(1) + XX)))
      FNUM = FA(4) + XX*(FA(3) + XX*(FA(2) + XX*(FA(1) + XX)))
      F = FNUM/(X*FDEN)
      GNUM = GA(4) + XX*(GA(3) + XX*(GA(2) + XX*(GA(1) + XX)))
      GDEN = GB(4) + XX*(GB(3) + XX*(GB(2) + XX*(GB(1) + XX)))
      G = GNUM/(XX*GDEN)
      IF(IFLAG.EQ.0) GO TO 28
      FN = F*SIN(X) - G*COS(X)
      RETURN
    1 XX = X*X
      CH = XX*(F2 + XX*(F4 + XX*(F6 + XX*(F8 + XX*(F10 )))))
      GAMMA = .577215664
      FN = GAMMA + LOGF(X) + CH
      RETURN
      ENTRY SI
      IFLAG = 0
      IF(X.LT.1.) GO TO 29
      GO TO 27
   28 FN = - F*COS(X) - G*SIN(X)
      RETURN
   29 XX = X*X
      PI = 3.1415926536
      SH = X*(1. + XX*(F3 + XX*(F5 + XX*(F7 + XX*(F9  + XX*F11)))))
      FN = SH - .5*PI
      RETURN
      ENTRY ELLIPK
      HOLDA=1.38629436112 $ HOLDB = 0.5
      DO 2 J=1,4
      A(J) = AK(J)
    2 B(J) = BK(J)
      GO TO 4
      ENTRY ELLIPE
      HOLDA = 1.0
      HOLDB = 0.0
      DO 3 J=1,4
      A(J) = AE(J)
```

```
 3 B(J) = BE(J)
 4 Q = QM = 1. - X
   FACT = LOGF(1./Q)
   DO 11 J=1,4
   HOLDA = HOLDA + A(J)*Q
   HOLDB = HOLDB + B(J)*Q
11 Q = Q*QM
   FN = HOLDA + HOLDB*FACT
   END
```

```
RIN=  0.090  ROUT=  0.110  H=  0.100 FK= 10.000  NQD1= 32  IMAX= 10  JMAX= 20

THE IMPEDANCE COEFFICIENTS FOR THIS RING TRANSDUCER IN UNITS OF RHO C A ARE

 Z1 =     3.79389+000   7.62228-001
 Z2 =     1.91188-002   2.36734-003
 Z3 =     8.14580-002   2.62133-001
Z1P =     3.04974-002  -9.18393-002
Z2P =     3.36869-001  -1.52465+000
Z3P =     5.36516-001  -1.29543-001

TIME LEFT     151.173 SECONDS
```

RING TRANSDUCER

RIN= 0.090 ROUT= 0.110 H= 0.100 FK= 10.000 NOD1= 32 IMAX= 10 JMAX= 20

NUM	SP REAL	SP IMAGINARY	VEL REAL	VEL IMAGINARY
1	-1.68964067+007	-7.28632251+006	-1.03000000+000	0.00000000+000
2	-1.67240098+007	-7.18043163+006	-1.03000000+000	0.00000000+000
3	-1.63799449+007	-6.96905714+006	-1.03000000+000	0.00000000+000
4	-1.58654426+007	-6.65287192+006	-1.03000000+000	0.00000000+000
5	-1.51816601+007	-6.23243279+006	-1.03000000+000	0.00000000+000
6	-1.43285294+007	-5.70743504+006	-1.03000000+000	0.00000000+000
7	-1.33023691+007	-5.07518842+006	-1.03000000+000	0.00000000+000
8	-1.20902782+007	-4.32697361+006	-1.03000000+000	0.00000000+000
9	-1.06536050+007	-3.43745457+006	-1.03000000+000	0.00000000+000
10	-8.84946073+006	-2.31425335+006	-1.03000000+000	0.00000000+000
1	-5.94569027+006	-5.05481738+005	-3.00000000-001	0.00000000+000
2	-5.57339113+006	-2.99199128+005	-3.00000000-001	0.00000000+000
13	-5.21429150+006	-9.86962798+004	-3.00000000-001	0.00000000+000
14	-4.87234888+006	9.32210914+004	-3.00000000-001	0.00000000+000
15	-4.54734618+006	2.76379070+005	-3.00000000-001	0.00000000+000
16	-4.23676910+006	4.51865036+005	-3.00000000-001	0.00000000+000
17	-3.93760985+006	6.21313704+005	-3.00000000-001	0.00000000+000
18	-3.64749427+006	7.86480965+005	-3.00000000-001	0.00000000+000
19	-3.36517701+006	9.48761039+005	-3.00000000-001	0.00000000+000
20	-3.09074592+006	1.10889949+006	-3.00000000-001	0.00000000+000
21	-1.71773374+006	2.07624234+006	9.70000000-001	0.00000000+000
22	-1.09790283+006	2.53582577+006	9.70000000-001	0.00000000+000
23	-6.93093461+005	2.84441575+006	9.70000000-001	0.00000000+000
24	-3.93304059+005	3.07748136+006	9.70000000-001	0.00000000+000
25	-1.62509632+005	3.25955936+006	9.70000000-001	0.00000000+000
26	1.61794302+004	3.40210606+006	9.70000000-001	0.00000000+000
27	1.51970059+005	3.51133565+006	9.70000000-001	0.00000000+000
28	2.50266259+005	3.59088113+006	9.70000000-001	0.00000000+000
29	3.14287642+005	3.64290592+006	9.70000000-001	0.00000000+000
30	3.45877678+005	3.66863508+006	9.70000000-001	0.00000000+000
31	3.45877678+005	3.66863508+006	9.70000000-001	0.00000000+000
32	3.14287642+005	3.64290592+006	9.70000000-001	0.00000000+000
33	2.50266259+005	3.59088113+006	9.70000000-001	0.00000000+000
34	1.51970059+005	3.51133565+006	9.70000000-001	0.00000000+000
35	1.61794302+004	3.40210606+006	9.70000000-001	0.00000000+000
36	-1.62509632+005	3.25955936+006	9.70000000-001	0.00000000+000
37	-3.93304059+005	3.07748136+006	9.70000000-001	0.00000000+000
38	-6.93093461+005	2.84441575+006	9.70000000-001	0.00000000+000
39	-1.09790283+006	2.53582577+006	9.70000000-001	0.00000000+000
40	-1.71773374+006	2.07624234+006	9.70000000-001	0.00000000+000
41	-3.09074592+006	1.10889949+006	-3.00000000-001	0.00000000+000
42	-3.36517701+006	9.48761039+005	-3.00000000-001	0.00000000+000
43	-3.64749427+006	7.86480965+005	-3.00000000-001	0.00000000+000
44	-3.93760985+006	6.21313704+005	-3.00000000-001	0.00000000+000
45	-4.23676910+006	4.51865036+005	-3.00000000-001	0.00000000+000
46	-4.54734618+006	2.76379070+005	-3.00000000-001	0.00000000+000
47	-4.87234888+006	9.32210914+004	-3.00000000-001	0.00000000+000
48	-5.21429150+006	-9.86962798+004	-3.00000000-001	0.00000000+000
49	-5.57339113+006	-2.99199128+005	-3.00000000-001	0.00000000+000
50	-5.94569027+006	-5.05481738+005	-3.00000000-001	0.00000000+000
51	-8.84946073+006	-2.31425335+006	-1.03000000+000	0.00000000+000
52	-1.06536050+007	-3.43745457+006	-1.03000000+000	0.00000000+000
53	-1.20902782+007	-4.32697361+006	-1.03000000+000	0.00000000+000
54	-1.33023691+007	-5.07518842+006	-1.03000000+000	0.00000000+000
55	-1.43285294+007	-5.70743504+006	-1.03000000+000	0.00000000+000
56	-1.51816601+007	-6.23243279+006	-1.03000000+000	0.00000000+000
57	-1.58654426+007	-6.65287192+006	-1.03000000+000	0.00000000+000
58	-1.63799449+007	-6.96905714+006	-1.03000000+000	0.00000000+000
59	-1.67240098+007	-7.18043163+006	-1.03000000+000	0.00000000+000
60	-1.68964067+007	-7.28632251+006	-1.03000000+000	0.00000000+000

THE COMPLEX RADIATION IMPEDANCE IN UNITS OF RHO C A IS (3.92364973+000 2.56547390+000)
TIME LEFT 147.382 SECONDS

FARFIELD PATTERN AT INFINITY

ANGLE	DB	MAGNITUDE
0.000	0.000	6.192189+005
5.000	-0.074	6.139883+005
10.000	-0.296	5.984582+005
15.000	-0.672	5.731086+005
20.000	-1.210	5.387252+005
25.000	-1.921	4.963764+005
30.000	-2.823	4.473831+005
35.000	-3.943	3.932799+005
40.000	-5.316	3.357707+005
45.000	-6.997	2.766838+005
50.000	-9.070	2.179354+005
55.000	-11.672	1.615306+005
60.000	-15.033	1.097012+005
65.000	-19.489	6.567744+004
70.000	-24.285	3.780840+004
75.000	-23.670	4.058214+004
80.000	-20.699	5.713481+004
85.000	-18.968	6.973370+004
90.000	-18.430	7.419349+004

TIME LEFT 146.454 SECONDS